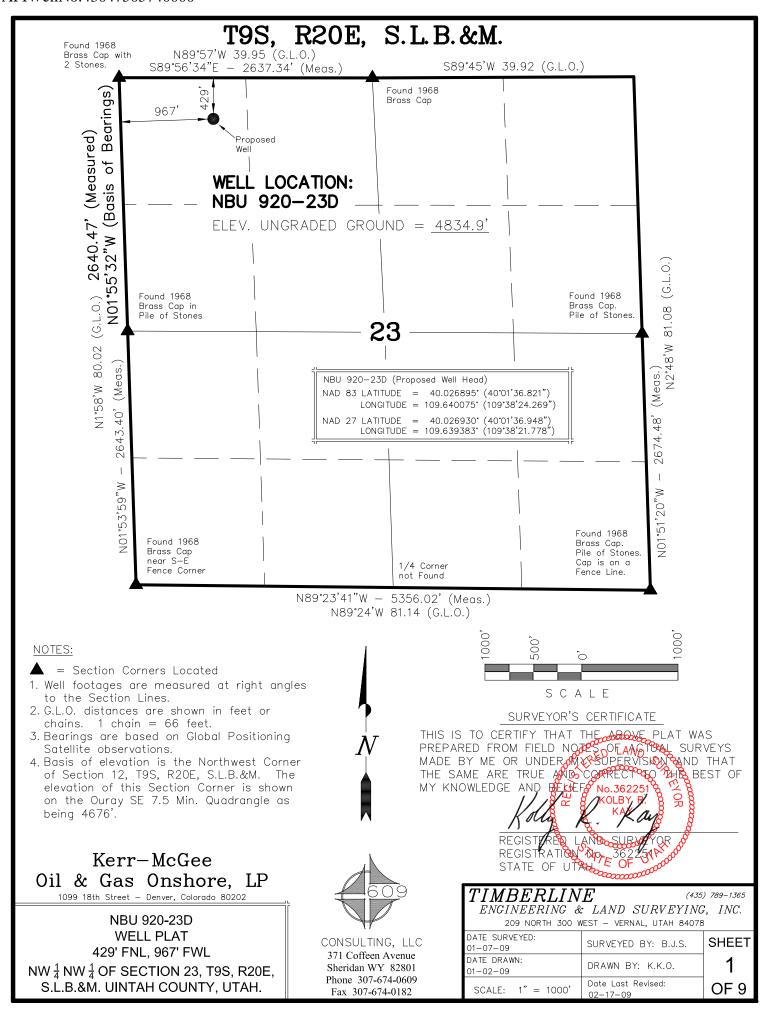
		STATE OF UTAH  DEPARTMENT OF NATURAL RESOURCES  DIVISION OF OIL, GAS AND MINING						FORI	_	
APPLIC	CATION FOR	PERMIT TO DRILL	L			1	1. WELL NAME and NUMBER  NBU 920-23D			
2. TYPE OF WORK  DRILL NEW WELL REENTER P&A WELL DEEPEN WELL DEEPEN WELL				3. FIELD OR WILDCAT  NATURAL BUTTES						
4. TYPE OF WELL  Gas Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES				
6. NAME OF OPERATOR KERR	-MCGEE OIL & G	GAS ONSHORE, L.P.				7. OPERATOR PHONE 720 929-6587				
8. ADDRESS OF OPERATOR P.O.	Box 173779, D	enver, CO, 80217				ġ	9. OPERATOR E-MAIL mary.mondragon@anadarko.com			
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)		11. MINERAL OWNE								
UTU 0577A  13. NAME OF SURFACE OWNER (if box 12	FEDERAL ( INC	IAN 🗐	) STATE (	) FEE(		FEDERAL INC	DIAN ( STATE (	~ ~		
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')							L6. SURFACE OWNE	R E-MAIL (If box 1	.2 = 'fee')	
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')	18. INTEND TO COM MULTIPLE FORMAT		LE PRODUCT	ION FROM	_  1	19. SLANT				
Ute Tribe	YES (Submit C	Commin	gling Applicat	ion) NO 🗓	<u> </u>	VERTICAL 📵 DIR	ECTIONAL ( HO	ORIZONTAL (		
20. LOCATION OF WELL	OTAGES	Q1	rr-QTR	SECTIO	ON	TOWNSHIP	RANGE	MERIDIAN		
LOCATION AT SURFACE 429 FR		IL 967 FWL	N	IWNW	23		9.0 S	20.0 E	S	
Top of Uppermost Producing Zone	429 FN	FNL 967 FWL		IWNW	23		9.0 S	20.0 E	S	
At Total Depth	429 FN	NL 967 FWL N		IWNW	23		9.0 S	20.0 E	S	
21. COUNTY  UINTAH		22. DISTANCE TO N		ST LEASE LINE (Feet) 23. NUMBER OF ACRES IN DRILLING UNIT 2091				JNIT		
		25. DISTANCE TO N (Applied For Drilling	g or Co		AME POOL	-	<b>26. PROPOSED DEPTH</b> MD: 10575 TVD: 10575			
27. ELEVATION - GROUND LEVEL 4835		28. BOND NUMBER	WYBO	000291	29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLIC Permit #43-8496			F APPLICABLE		
		A.	TTACH	IMENTS						
VERIFY THE FOLLOWING	ARE ATTACH	ED IN ACCORDAN	CE WI	ITH THE UT	ΓAH OIL A	ND G	AS CONSERVATI	ON GENERAL RU	ILES	
WELL PLAT OR MAP PREPARED BY	LICENSED SUR	VEYOR OR ENGINEE	R	COMPLETE DRILLING PLAN						
AFFIDAVIT OF STATUS OF SURFACE	OWNER AGRE	EMENT (IF FEE SURF	ACE)	FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER						
DIRECTIONAL SURVEY PLAN (IF DI	RECTIONALLY	OR HORIZONTALLY		<b>№</b> торо	OGRAPHICA	L MAP				
NAME Danielle Piernot	TI	ITLE Regulatory Analys	t		PHON	<b>E</b> 720 9	929-6156			
SIGNATURE	DA	<b>ATE</b> 07/16/2009			EMAIL	<b>L</b> daniel	le.piernot@anadarko	.com		
API NUMBER ASSIGNED APPROVAL 43047505740000					3	Permi	SAMM t Manager			

API Well No: 43047505740000 Received: 7/16/2009

	Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)			
Prod	7.875	4.5	0	10575			
Pipe	Grade	Length	Weight				
	Grade HCP-110 LT&C	975	11.6				
	Grade I-80 LT&C	9600	11.6				

API Well No: 43047505740000 Received: 7/16/2009

	Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)			
Surf	12.25	9.625	0	2700			
Pipe	Grade	Length	Weight				
	Grade J-55 LT&C	2700	36.0				



Surface: 429' FNL, 967' FWL (NW/4NW/4) Sec. 23 T9S R20E

> Uintah, Utah Mineral Lease: UTU 0577A

#### **ONSHORE ORDER NO. 1**

#### DRILLING PROGRAM

#### 1. – 2. <u>Estimated Tops of Important Geologic Markers</u>: <u>Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations</u>:

<u>Formation</u>	<u>Depth</u>	Resource
Uinta	0 – Surface	
Green River	1,735'	
Birds Nest	1,976'	Water
Mahogany	2,490'	Water
Wasatch	5,141'	Gas
Mesaverde	8,454'	Gas
MVU2	9,413'	Gas
MVL1	9,926'	Gas
TD	10,575'	

#### 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Drilling Program.

#### 4. **Proposed Casing & Cementing Program:**

Please refer to the attached Drilling Program.

#### 5. <u>Drilling Fluids Program:</u>

Please refer to the attached Drilling Program.

#### **Evaluation Program:**

Please refer to the attached Drilling Program.

#### 7. <u>Abnormal Conditions</u>:

Maximum anticipated bottomhole pressure calculated at 10,575' TD, approximately equals 6,588 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 4,262 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

#### 8. Anticipated Starting Dates:

*Drilling is planned to commence immediately upon approval of this application.* 

#### 9. <u>Variances:</u>

Please refer to the attached Drilling Program.

Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

#### **Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12-1/4 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 12-1/4 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 9-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

#### Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

#### Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

#### **Conclusion**

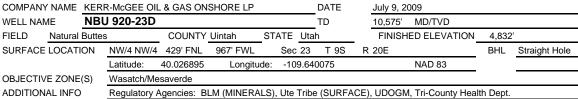
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

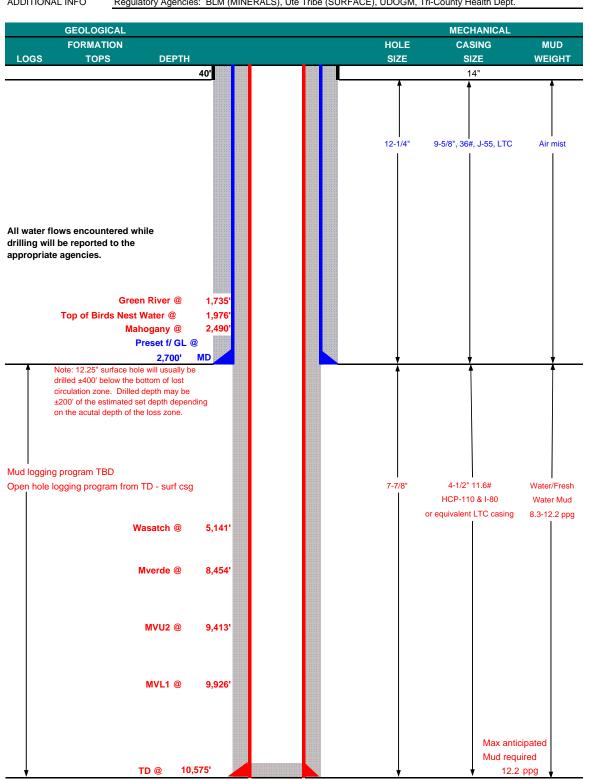
#### 10. Other Information:

Please refer to the attached Drilling Program.



## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM







#### **KERR-McGEE OIL & GAS ONSHORE LP**

#### **DRILLING PROGRAM**

#### **CASING PROGRAM**

								l l	ESIGN FACT	ORS
	SIZE	INT	ERVA	L	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"	C	)-40'							
								3,520	2,020	453,000
SURFACE	9-5/8"	0	to	2700	36.00	J-55	LTC	0.80*	1.60	4.66
								7,780	6,350	201,000
PRODUCTION	4-1/2"	0	to	9600	11.60	I-80	LTC	1.78	1.04	2.01
								10,690	8,650	279,000
		9600	to	10575	11.60	HCP-110	LTC	2.44	1.29	30.32

\*Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above.

D.F. = 2.07

- 1) Max Anticipated Surf. Press.(MASP) (Surf Csg) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac grad x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.2 ppg) 0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MASP 4,262 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.2 ppg) 0.62 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MABHP 6,588 psi

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE LEAD	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	380	0%	15.60	1.18
		+ 2% CaCl + 0.25 pps flocele				
		Premium cmt + 2% CaCl				
SURFACE		NOTE: If well will circulate water to sur	face, optic	n 2 will be	utilized	
Option 2 LEAD	2,200'	Prem cmt + 16% Gel + 10 pps gilsonite	250	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOC				
TAIL	500	Premium cmt + 2% CaCl	180	35%	15.60	1.18
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION LEAD	4,635'	Premium Lite II + 0.25 pps celloflake +	440	40%	11.00	3.38
		5 pps gilsonite + 10% gel '+ 1% Retarder				
TAIL	5,940'	50/50 Poz/G + 10% salt + 2% gel	1450	40%	14.30	1.31
		+ 0.1% R-3				

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

#### FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.

**PRODUCTION** 

Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint for a total of 15 bow spring centralizers.

#### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

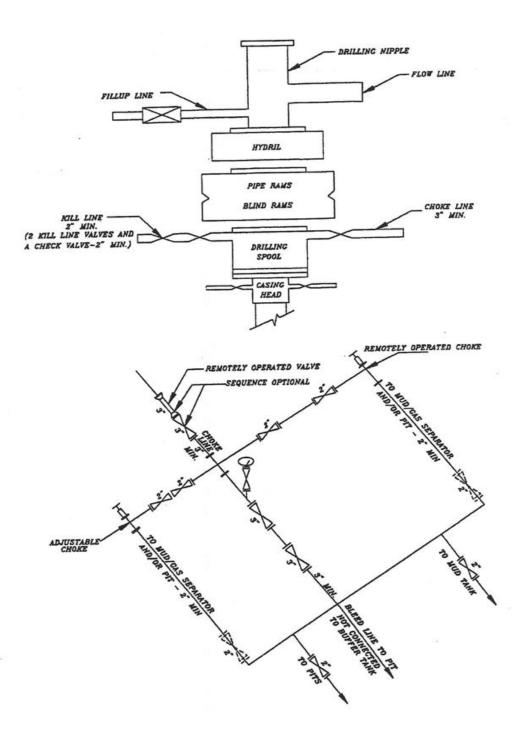
Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:		DATE:	
	John Huycke / Emile Goodwin		
DRILLING SUPERINTENDENT:		DATE:	
	John Merkel / Lovel Young		

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

#### EXHIBIT A NBU 920-23D



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

#### WELL PAD LEGEND

WELL LOCATION

EXISTING CONTOURS (2' INTERVAL) PROPOSED CONTOURS (2' INTERVAL)

#### WELL PAD NBU 920-23D QUANTITIES

EXISTING GRADE @ LOC. STAKE = 4,834.9' FINISHED GRADE ELEVATION = 4,831.5' CUT SLOPES = 1.5:1 FILL SLOPES = 1.5:1

TOTAL CUT FOR WELL PAD = 16,766 C.Y. TOTAL FILL FOR WELL PAD = 16,586 C.Y. TOPSOIL @ 6" DEPTH = 3,182 C.Y. EXCESS MATERIAL = 180 C.Y. TOTAL DISTURBANCE = 3.95 ACRES SHRINKAGE FACTOR = 1.10 SWELL FACTOR = 1.00 RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 28,730 BARRELS RESERVE PIT VOLUME +/- 7,720 CY BACKFLOW PIT CAPACITY (2' OF FREEBOARD) +/- 9,490 BARRELS BACKFLOW PIT VOLUME +/- 2,660 CY

NBU 920-23D WELL PAD - LOCATION LAYOUT 429' FNL, 967' FWL NW1/4 NW1/4, SECTION 23, T9S, R20E, S.L.B.&M., UINTAH COUNTY, UTAH



CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

Sc	cale:	1"=100'	Date:	2/20/09	SHEET NO:	
R	EVISED:			BY DATE	2	2 OF 9



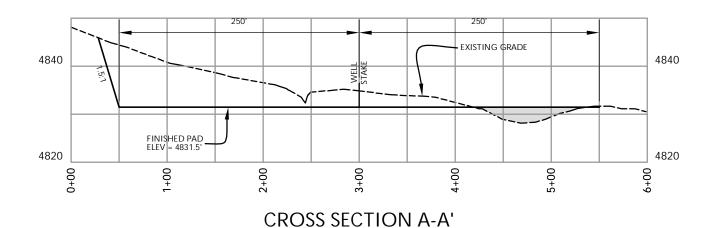


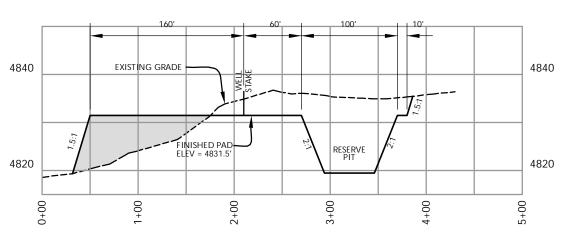
2' CONTOURS

*Timberline* Engineering & Land Surveying, Inc. 38 WEST 100 NORTH

(435) 789-1365 VERNAL, UTAH 84078







#### **CROSS SECTION B-B'**

NOTE: CROSS SECTION B-B' DEPICTS
MAXIMUM RESERVE PIT DEPTH.

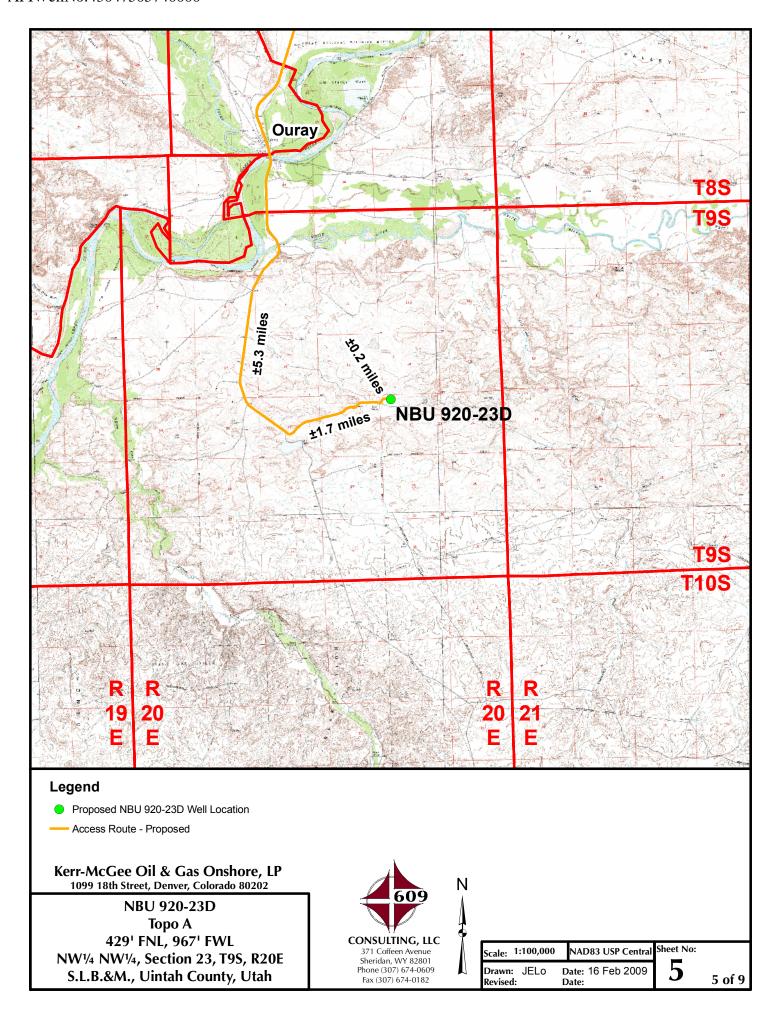


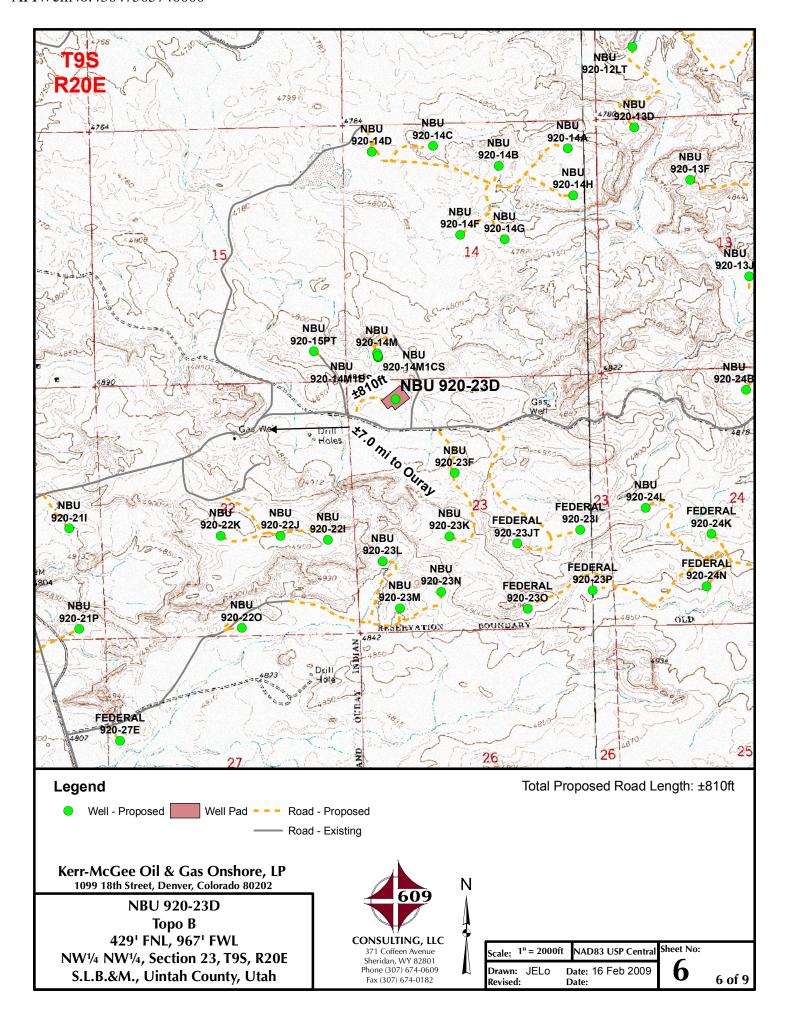
CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

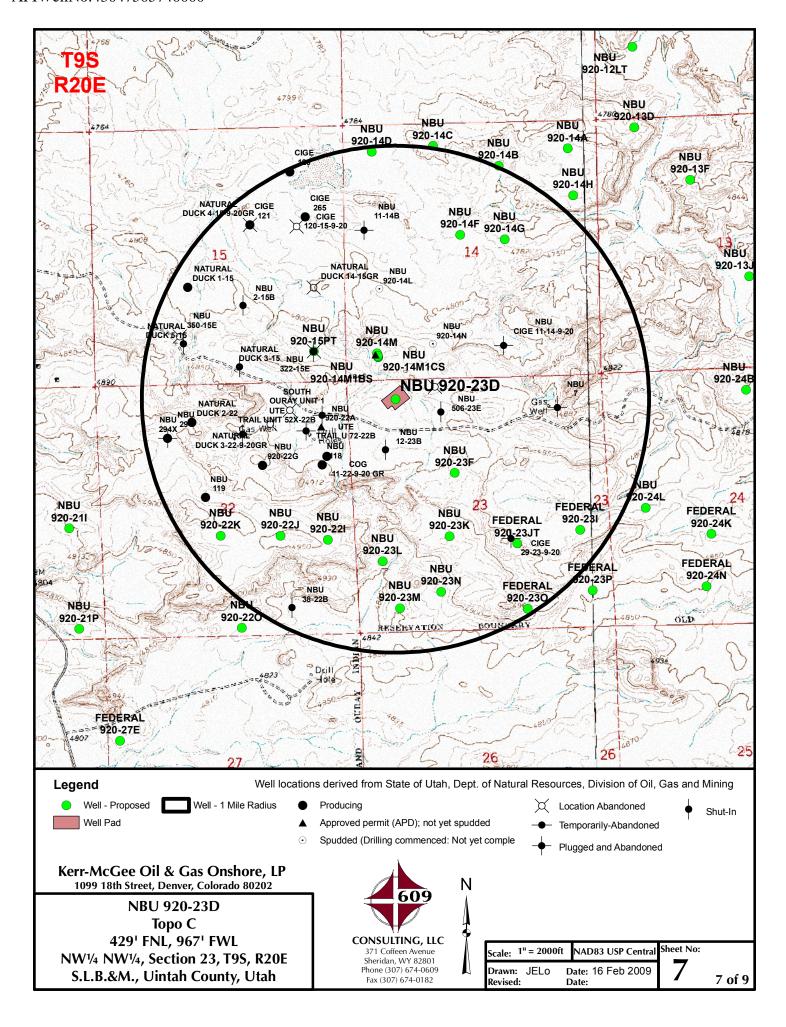
HORIZONTAL 0 50 100 1" = 100'

VERTICAL 0 10 20 1" = 20'

Timberline (435) 789-1365
Engineering & Land Surveying, Inc.
38 WEST 100 NORTH VERNAL, UTAH 84078







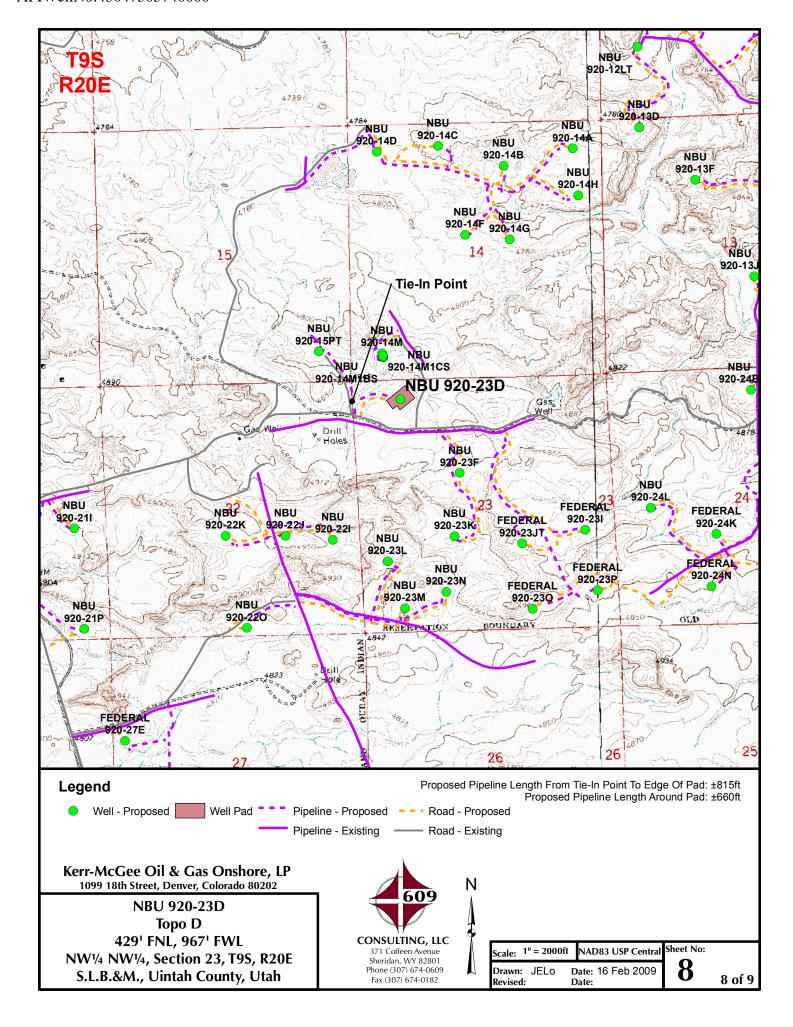




PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHWESTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHERLY

Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

NBU 920-23D 429' FNL, 967' FWL NW 1/4 NW 1/4 OF SECTION 23, T9S, R20E, S.L.B.&M. UINTAH COUNTY, UTAH.



CONSULTING, LLC 371 Coffeen Avenue Sheridan WY 82801 Phone 307-674-0609 Fax 307-674-0182

LOCATION	PHOTOS

**DATE TAKEN: 01-07-09** DATE DRAWN: 02-02-09

TAKEN BY: B.J.S.

DRAWN BY: K.K.O.

REVISED: 02-17-09

Timberline

(435) 789-1365 Engineering & Land Surveying, Inc. 209 NORTH 300 WEST VERNAL, UTAH 84078

SHEET 4

#### Kerr-McGee Oil & Gas Onshore, LP NBU 920-23D Section 23, T9S, R20E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 13.9 MILES TO THE JUNCTION OF STATE HIGHWAY 88. EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION ALONG STATE HIGHWAY 88 APPROXIMATELY 16.8 MILES TO OURAY, UTAH. FROM OURAY, PROCEED IN A SOUTHERLY DIRECTION ALONG THE SEEP RIDGE ROAD (COUNTY B ROAD 2810) APPROXIMATELY 5.3 MILES TO THE INTERSECTION OF A SERVICE ROAD TO THE NORTHEAST. EXIT LEFT AND PROCEED IN A NORTHEASTERLY, THEN EASTERLY DIRECTION ALONG THE SERVICE ROAD APPROXIMATELY 1.7 MILES TO THE PROPOSED ACCESS ROAD. FOLLOW ROAD FLAGS IN A NORTHEASTERLY DIRECTION APPROXIMATELY 810 FEET TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 37.9 MILES IN A SOUTHERLY DIRECTION.

Surface: 429' FNL, 967' FWL (NW/4NW/4) Sec. 23 T9S R20E

Uintah, Utah

Mineral Lease: UTU 0577A Surface Owner: Ute Indian Tribe

#### ONSHORE ORDER NO. 1

#### MULTI-POINT SURFACE USE & OPERATIONS PLAN SUBMITTED WITH SITE-SPECIFIC INFORMATION

This Application for Permit to Drill (APD) is filed under the Notice of Staking (NOS) process as stated in Onshore Order No. 1 (OSO #1) and supporting Bureau of Land Management (BLM) and Bureau of Indian Affairs (BIA) documents. An NOS was submitted showing the surface location in the NW/4 NW/4 of Section 23 T9S R20E.

This Surface Use Plan of Operations (SUPO) or 13-point plan provides the site-specific information for the above-referenced wells. This information is to be incorporated by reference into the Master Development Plan (MDP) for Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee). The MDP is available upon request from the BIA-Ft Duchesne Office.

An on-site meeting was held on June 24, 2009. Present were:

- Verlyn Pindell and Dave Gordon BLM;
- Kolby Kay and Mitch Batty Timberline Surveying, Inc.
- Tony Kazeck, Jeff Samuels, Raleen White, David Liddell, and Hal Blanchard Kerr-McGee
- Bucky Secakuku BIA
- Nick Hall Grasslands Consulting, Inc.
- Scott Carson Smiling Lake Consulting
- Keith Montgomery Montgomery Archaeological Consultants, Inc.

#### 1. Existing Roads:

- A) Refer to Topo Map A for directions to the location.
- B) Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

#### 2. Planned Access Roads:

See MDP for additional details on road construction.

Approximately  $\pm 0.15$  miles ( $\pm 810$ ') of new access road is proposed. Please refer to the attached Topo Map B. No pipelines will be crossed with the new construction.

Existence of pipelines; maximum grade; turnouts; major cut and fills, culverts, or bridges; gates, cattle guards, fence cuts, or modifications to existing facilities were determined at the on-site and are typically shown on the attached Exhibits and Topo maps.

#### 3. Location of Existing Wells Within a 1-Mile Radius:

Please refer to Topo Map C.

#### 4. <u>Location of Existing and Proposed Facilities:</u>

See MDP for additional details on Existing and Proposed Facilities.

The following guidelines will apply if the well is productive.

Approximately  $\pm 1,475$ ' of pipeline is proposed. Refer to Topo D for the existing pipeline. Appropriate surface use agreements have been or will be obtained from the Ute Indian Tribe. Pipeline segments will be welded or zaplocked together on disturbed areas in or near the location, whenever possible, and dragged into place

#### 5. Location and Type of Water Supply:

See MDP for additional details on Location and Type of Water Supply.

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, Application number 53617. Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

#### **6.** Source of Construction Materials:

See MDP for additional details on Source of Construction Materials.

#### 7. <u>Methods of Handling Waste Materials</u>:

See MDP for additional details on Methods of Handling Waste Materials.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites:

RNI in Sec. 5 T9S R22E

NBU #159 in Sec. 35 T9S R21E Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

#### 8. **Ancillary Facilities:**

See MDP for additional details on Ancillary Facilities.

None are anticipated.

#### **9. Well Site Layout:** (See Location Layout Diagram)

See MDP for additional details on Well Site Layout.

All pits will be fenced according to the following minimum standards:

- Net wire (39-inch) will be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.
- Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.
- All wire shall be stretched, by using a stretching device, before it is attached to corner posts.

#### 10. Plans for Reclamation of the Surface:

See MDP for additional details on Plans for Reclamation of the Surface.

Kerr-McGee shall call the BIA for the seed mixture prior to starting interim and/or final reclamation actions.

#### 11. Surface/Mineral Ownership:

The well pad and access road are located on lands owned by:

Ute Indian Tribe PO Box 70 Fort Duchesne, Utah 84026 435-722-5141

The mineral ownership is listed below:

United States of America Bureau of Land Management 170 South 500 East Vernal, UT 84078 435-781-4400

#### 12. Other Information:

See MDP for additional details on Other Information.

# 'APIWellNo:43047505740000'

#### 13. Lessee's or Operators' Representative & Certification:

Kathy Schneebeck Dulnoan Staff Regulatory Analyst Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6007 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Look Sell Duch	July 15, 2009	
Kathy Schneebeck Dulnoan	Date	Ī

#### CLASS I REVIEW OF KERR-MCGEE OIL AND GAS ONSHORE LP'S 88 PROPOSED WELL LOCATIONS (T9S, R20E, SECS. 1, 14, 15, 20, 21, 22, 23, 27, 29, 32, 33, 34) UINTAH COUNTY, UTAH

By:

Jacki A. Montgomery

Prepared For:

Ute Indian Tribe
Uintah and Ouray Agency

**Prepared Under Contract With:** 

Kerr-McGee Oil and Gas Onshore LP 1368 South 1200 East Vernal, Utah 84078

Prepared By:

Montgomery Archaeological Consultants, Inc. P.O. Box 219 Moab, Utah 84532

MOAC Report No. 08-318

March 4, 2009

United States Department of Interior (FLPMA)
Permit No. 08-UT-60122

# Paleontological Assessment for Anadarko Petroleum Corp.

NBU 920-23D

Ouray Quadrangle
Uintah County, Utah

Prepared for

Anadarko Petroleum Corp.
and
Ute Tribe
Uintah and Ouray Reservation

Prepared by

**SWCA Environmental Consultants** 

SWCA #UT09-14314-10



## **Grasslands Consulting, Inc.**

4800 Happy Canyon Road, Suite 110, Denver, CO 80237 (303) 759-5377 Office (303) 759-5324 Fax

#### SPECIAL STATUS PLANT AND WILDLIFE SPECIES REPORT

Operator: Kerr-McGee Oil & Gas Onshore LP

Wells: NBU 920-23D, NBU 920-23F, NBU 920-23I, NBU 920-23J, NBU 920-23K, NBU 920-

23L, NBU 920-23M, NBU 920-23N, NBU 920-23O, NBU 920-23P

**Pipelines:** Proposed pipelines leading to all proposed wells.

**Access Roads:** Access roads lead to all proposed wells.

Location: Section 23, Township 9 South, Range 20 East; Uintah County, Utah

**Survey-Species:** Uinta Basin Hookless Cactus (*Sclerocactus wetlandicus*) and nesting raptors

**Date:** 06/15/2009, 06/16/2009, and 06/18/2009

**Observer(s):** Grasslands Consulting, Inc. Biologists: Chris Gayer, Nick Hall, BJ Lukins, Jay Slocum, Dan Hamilton, Matt Kelahan, and Jonathan Sexauer. Technicians: Chad Johnson.

**Weather:** Partly cloudy, 80-85°F, 0-5 mph winds with no precipitation.

### **United States Department of the Interior**

# BUREAU OF LAND MANAGEMENT Utah State Office P.O. Box 45155 Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

July 17, 2009

#### Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2009 Plan of Development Natural Buttes Unit Uintah

County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2009 within the Natural Buttes Unit, Uintah County, Utah.

API # WELL NAME LOCATION

(Proposed PZ WASATCH-MESA VERDE)

```
43-047-50555 NBU 920-23M Sec 23 T09S R20E 0510 FSL 0821 FWL 43-047-50560 NBU 920-22N Sec 22 T09S R20E 1206 FSL 2411 FWL
43-047-50562 NBU 920-20G3CS Sec 20 T09S R20E 2011 FSL 0794 FEL
                                               BHL Sec 20 T09S R20E 2580 FNL 2660 FEL
43-047-50563 NBU 920-23N Sec 23 T09S R20E 0837 FSL 1702 FWL
43-047-50566 NBU 920-20H4CS Sec 20 T09S R20E 1993 FSL 0786 FEL
                                                         BHL Sec 20 T09S R20E 2410 FNL 0650 FEL
43-047-50567 NBU 920-2012AS Sec 20 T09S R20E 2029 FSL 0803 FEL
                                                          BHL Sec 20 T09S R20E 2415 FSL 0925 FEL
43-047-50568 NBU 920-20L4CS Sec 20 T09S R20E 0660 FSL 0849 FWL
                                                          BHL Sec 20 T09S R20E 1470 FSL 0675 FWL
43-047-50569 NBU 920-20M2AS Sec 20 T09S R20E 0656 FSL 0829 FWL
                                                         BHL Sec 20 T09S R20E 1205 FSL 0650 FWL
43-047-50570 NBU 920-20M3AS Sec 20 T09S R20E 0652 FSL 0810 FWL
                                                 BHL Sec 20 T09S R20E 0545 FSL 0660 FWL
43-047-50571 NBU 920-23F Sec 23 T09S R20E 1988 FNL 2118 FWL

      43-047-50571
      NBU
      920-23F
      Sec
      23
      T09S
      R20E
      1988
      FNL
      2118
      FWL

      43-047-50572
      NBU
      920-23K
      Sec
      23
      T09S
      R20E
      1996
      FSL
      1939
      FWL

      43-047-50573
      NBU
      920-23L
      Sec
      23
      T09S
      R20E
      1491
      FSL
      0517
      FWL

      43-047-50574
      NBU
      920-23D
      Sec
      23
      T09S
      R20E
      0429
      FNL
      0967
      FWL

      43-047-50575
      NBU
      920-15I
      Sec
      15
      T09S
      R20E
      2071
      FSL
      0562
      FEL

      43-047-50576
      NBU
      920-14F
      Sec
      14
      T09S
      R20E
      2335
      FNL
      2412
      FWL

      43-047-50577
      NBU
      920-14C
      Sec
      14
      T09S
      R20E
      0477
      FNL
      1890
      FWL

      43-047-50578
      NBU
      920-14B
      Sec
      14
      T09S
      R20E
      0981
      FNL
      2071
      FEL

      43-047-50579
      NBU
      920-14A
```

This office has no objection to permitting the wells at this time.

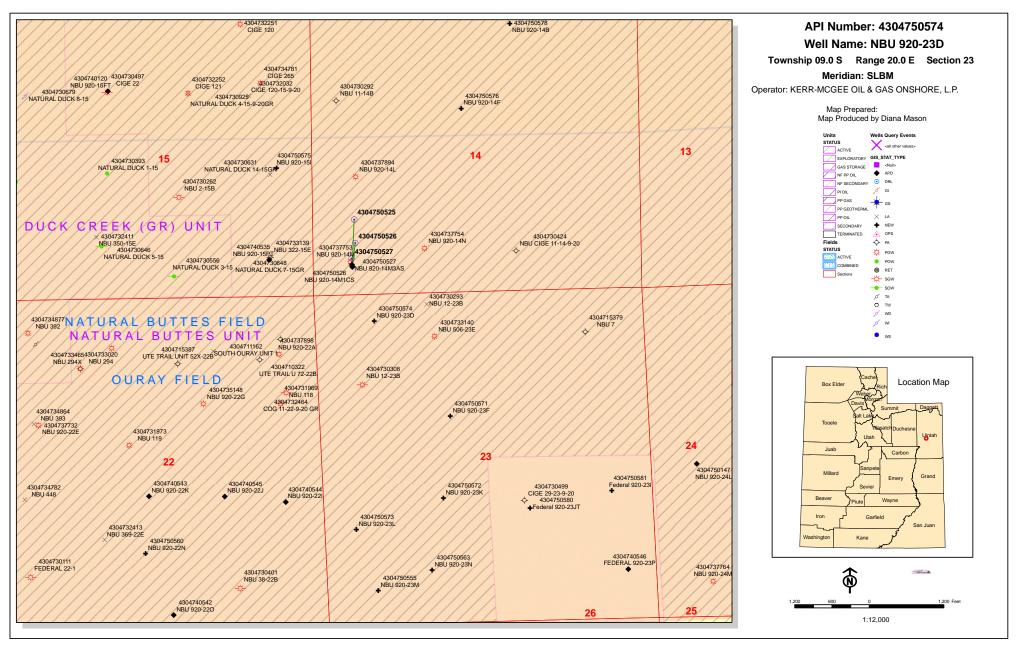
/s/ Michael L. Coulthard

bcc: File - Natural Buttes Unit

Division of Oil Gas and Mining

Central Files Agr. Sec. Chron Fluid Chron

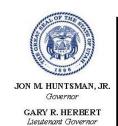
MCoulthard:mc:7-17-09



#### WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED:	7/16/2009	API NO. ASSI	<b>GNED:</b> 43047505740000
WELL NAME:	NBU 920-23D		
OPERATOR:	KERR-MCGEE OIL &	GAS ONSHORE, L.P. (N2995) PHONE NU	MBER: 720 929-6156
CONTACT:	Danielle Piernot		
PROPOSED LOCATION:	NWNW 23 090S 200	OE Permit Tech Ro	eview: 🗾
SURFACE:	0429 FNL 0967 FWL	Engineering R	eview: 🗾
воттом:	0429 FNL 0967 FWL	Geology R	eview: 🖊
COUNTY:	UINTAH		
LATITUDE:	40.02687	LONGI	TUDE: -109.63947
<b>UTM SURF EASTINGS:</b>	616094.00	NORTH	IINGS: 4431416.00
FIELD NAME:	NATURAL BUTTES		
LEASE TYPE:	1 - Federal		
LEASE NUMBER:	UTU 0577A	PROPOSED PRODUCING FORMATION(S): WASA	ГСН-MESA VERDE
SURFACE OWNER:	2 - Indian	COALBED MET	HANE: NO
RECEIVED AND/OR REVIE	:WED:	LOCATION AND SITING:	
<b>⊮</b> PLAT		R649-2-3.	
<b>▶ Bond:</b> FEDERAL - WYB	000291	Unit: NATURAL BUTTES	
Potash		R649-3-2. General	
✓ Oil Shale 190-5			
Oil Shale 190-3		R649-3-3. Exception	
Oil Shale 190-13		✓ Drilling Unit	
<b>✓ Water Permit:</b> Permit	#43-8496	Board Cause No: Cause 173-14	
RDCC Review:		Effective Date: 12/2/1999	
Fee Surface Agreeme	ent	Siting: 460' fr u bdry & uncomm. tr	act
<b>✓</b> Intent to Commingle		R649-3-11. Directional Drill	
Commingling Approved	i i		
Comments: Presite C	ompleted		
4 - Fede	mingling - ddoucet ral Approval - dmaso Shale 190-5(b) - dma		

API Well No: 43047505740000



#### State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

#### **Permit To Drill**

\*\*\*\*\*\*

Well Name: NBU 920-23D API Well Number: 43047505740000 Lease Number: UTU 0577A

Surface Owner: INDIAN
Approval Date: 8/11/2009

#### **Issued to:**

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

#### **Authority:**

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-14. The expected producing formation or pool is the WASATCH-MESA VERDE Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### **Commingle:**

In accordance with Cause No. 173-14 commingling the production from the Wasatch formation and the Mesaverde formation in this well is allowed

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### **Conditions of Approval:**

State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

#### **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during

API Well No: 43047505740000

drilling of this well:

• Within 24 hours following the spudding of the well – contact Carol Daniels at 801-538-5284 (please leave a voicemail message if not available)

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at http://oilgas.ogm.utah.gov

#### **Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) due prior to implementation
- Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
- Report of Water Encountered (Form 7) due within 30 days after completion
- Well Completion Report (Form 8) due within 30 days after completion or plugging

**Approved By:** 

Gil Hunt

Associate Director, Oil & Gas

Xil Hut

Form 3160-3 (August 2007)

# RECEIVED

**UNITED STATES** DEPARTMENT OF THE INTERIOR

FORM APPROVED OMB No. 1004-0136 Expires July 31, 2010

APPLICATION FOR PERMIT  1a. Type of Work: ☑ DRILL ☐ REENTER	TO DOUL OF PEENTED	UTU0577A
1a. Type of Work: ☑ DRILL ☐ REENTER	D DRILL OK KLENT BLM	6. If Indian, Allottee or Tribe Name
		7. If Unit or CA Agreement, Name and N 891008900A
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Ot	ther Single Zone Multiple Zone	8. Lease Name and Well No. NBU 920-23D
KERRMCGEE OIL&GAS ONSHORE-NA: Danielle	: DANIELLE E PIERNOT e.Piernot@anadarko.com	9. API Well No. 43-047-50574
3a. Address PO BOX 173779 DENVER, CO 80202-3779	3b. Phone No. (include area code) Ph: 720-929-6156 Fx: 720-929-7156	10. Field and Pool, or Exploratory NATURAL BUTTES
4. Location of Well (Report location clearly and in accord	lance with any State requirements.*)	11. Sec., T., R., M., or Blk. and Survey o
At surface NWNW 429FNL 967FWL 4 At proposed prod. zone NWNW 429FNL 967FWL 4	40.02690 N Lat, 109.64008 W Lon 40.02690 N Lat, 109.64008 W Lon	Sec 23 T9S R20E Mer SLB
<ol> <li>Distance in miles and direction from nearest town or post APPROXIMATELY 7 MILES SOUTHEAST OF O</li> </ol>	toffice* OURAY, UTAH	12. County or Parish I3. UINTAH
<ol> <li>Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)</li> <li>429 FEET</li> </ol>	16. No. of Acres in Lease 2091.00	17. Spacing Unit dedicated to this well
<ol> <li>Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.</li> </ol>	19. Proposed Depth	20. BLM/BIA Bond No. on file
APPROXIMATELY 900 FEET	10575 MD 10575 TVD	WYB000291
21. Elevations (Show whether DF, KB, RT, GL, etc. 4835 GL	22. Approximate date work will start 08/03/2009	23. Estimated duration 60-90 DAYS
Well plat certified by a registered surveyor.  A Drilling Plan.  A Surface Use Plan (if the location is on National Forest Syst SUPO shall be filed with the appropriate Forest Service Of	tem Lands, the ffice).  stem Lands, the ffice).  stem Lands, the ffice).  stem 20 above).  Superator certification  Such other site specific infauthorized officer.	ons unless covered by an existing bond on file formation and/or plans as may be required by
5. Signature (Electronic Submission) itle	Name (Printed/Typed) DANIELLE E PIERNOT Ph: 720-929-61	56 Date 07/15/20
REGULATORY ANALYST		
Approved by (Signature)	Name (Printed/Typed)	Date
itle Assistant Field Manager	Office Stephanic Thoward	12/18/0
Lands & Mineral Resources	VERNAL FIELD OFFICE	ease which would entitle the applicant to con

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

096XJ5377AE

NO NOS



#### UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE** 170 South 500 East

**VERNAL. UT 84078** 

(435) 781-4400



#### CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:

**KERR MCGEE OIL & GAS** 

Well No: API No:

**NBU 920-23D** 

43-047-50574

Location: Lease No:

Agreement:

NWNW, Sec.23, T9S R20E

UTU-0577A

**Natural Buttes Unit** 

**OFFICE NUMBER:** 

(435) 781-4400

**OFFICE FAX NUMBER:** 

(435) 781-3420

#### A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

#### NOTIFICATION REQUIREMENTS

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to: ut vn opreport@blm.gov.
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 7 Well: NBU 920-23D 12/17/2009

## SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COA's)

#### Site-Specific Conditions of Approval:

- Paint New facilities "shadow gray."
- Use pit run/gravel on well pad/access road.
- Monitor location by a permitted archaeologist during the construction process.
- In accordance with the guidelines specified in the Utah BLM Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002 (See Appendix D), a raptor survey should be conducted prior to construction of the proposed location, pipeline, or access road if construction would take place during raptor nesting season (January 01 through September 30) and conduct its operations according to specification in the guidelines.
- If project construction operation are scheduled to occur after June 15, 2010, KMG will conduct
  additional biological surveys in accordance with the guidelines specified I the USFWS Rare
  Plant Conservation Measures for Uinta Basin hookless cactus (See Appendix D) and conduct its
  operation according to its specifications.

#### **BIA Standard Conditions of Approval:**

Soil erosion will be mitigated by reseeding all disturbed areas.

- The gathering pipelines will be constructed to lie on the surface. The surface pipelines will not be bladed or cleared of vegetation. Where pipelines are constructed parallel to roads they may be welded on the road and then lifted from the road onto the right-of-way. Where pipelines do not parallel roads but cross-country between sites, they shall be welded in place at well sites or on access roads and then pulled between stations with a suitable piece of equipment. Traffic will be restricted along these areas so that the pipeline right-of-way will not be used as an access road.
- An open drilling system shall be used, unless otherwise specified in 10.0 Additional Stipulations
  of this document and in the Application for Permit to Drill. A closed drilling system shall be sued
  in all flood plain areas, and other highly sensitive areas, recommended by the Ute Tribe
  Technician, BIA, and other agencies involved.
- The reserve pit shall be lined with a synthetic leak proof liner. After the drilling operation is complete, excess fluids shall be removed from the reserve pit and either hauled to an approved disposal site or shall be used to drill other wells. When the fluids are removed the pit shall be backfilled a minimum of 3.0' below the soil surface elevation.
- A closed production system shall be used. This means all produced water and oil field fluid wastes shall be contained in leak proof tanks. These fluids shall be disposed of in either approved injection wells or disposal pits.
- Major low water crossings will be armored with pit run material to protect them from erosion.
- All personnel should refrain from collecting any paleontological fossils and from disturbing any fossil resources in the area.

Page 3 of 7 Well: NBU 920-23D 12/17/2009

- If fossils are exposed or identified during construction, all construction must cease and immediate notification to the Energy and Minerals Department and the Cultural Rights Protection Officer.
- Before the site is abandoned the company will be required to restore the right-of-way to near its
  original state. The disturbed area will be reseeded with desirable perennial vegetation. If
  necessary, the Bureau of Indian Affairs or Bureau of Land Management will provide a suitable
  seed mixture.
- Noxious weeds will be controlled on all surface disturbances within the project area. If noxious
  weeds spread from the project area onto adjoining land, the company will also be responsible
  for their control.
- If project construction operations are scheduled to occur after December 31, 2009, KMG should conduct annual raptor surveys in accordance with the guidelines specified in the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances, 2002 (See Appendix E) and conduct its operations according to applicable seasonal restrictions and spatial offsets.
- USFWS threatened and endangered plant and animal conservation measures will be followed, as appropriate to the species identified by the biological resource survey (See Appendix E).
- All personnel should refrain from collecting artifacts and from disturbing any significant cultural resources in the area.
- If artifacts or any culturally sensitive materials are exposed or identified during construction, all
  construction must cease and immediate notification to the Energy and Minerals Department and
  the Cultural Rights Protection Officer.

Page 4 of 7 Well: NBU 920-23D 12/17/2009

# DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

# SITE SPECIFIC DOWNHOLE COAs:

- A formation integrity test shall be performed at the surface casing shoe.
- Gamma Ray Log shall be run from Total Depth to Surface.

#### Variances Granted

#### Air Drilling

- Dust suppression equipment. Variance granted for water mist system to substitute for the dust suppression equipment.
- Blooie line discharge 100' from the well bore, variance granted for blooie line discharge to be 75' from the well bore.
- Compressors located in the opposite direction from the blooie line a minimum of 100' from the well bore. Variance granted for truck/trailer mounted air compressors.
- Straight run blooie line. Variance granted for targeted "T's" at bends.
- Automatic igniter. Variance granted for igniter due to water mist.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

### DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the
  daily drilling report. Components shall be operated and tested as required by Onshore Oil &
  Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be
  performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be
  reported in the driller's log.

Page 5 of 7 Well: NBU 920-23D 12/17/2009

- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water
  is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM
  Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.
- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM,
   Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 6 of 7 Well: NBU 920-23D 12/17/2009

#### OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - o Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - o The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - o Unit agreement and/or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will
  be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be
  reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major
  Events" will be reported in writing within 15 days. "Minor Events" will be reported on the
  Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or

Page 7 of 7 Well: NBU 920-23D 12/17/2009

data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field
  Office Petroleum Engineers will be provided with a date and time for the initial meter calibration
  and all future meter proving schedules. A copy of the meter calibration reports shall be
  submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API
  standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All
  measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted
  to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs
  first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be
  adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively
  sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior
  approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30
  days, prior approval of the BLM Vernal Field Office shall be obtained and notification given
  before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office
  Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in
  order that a representative may witness plugging operations. If a well is suspended or
  abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent
  Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual
  plugging of the well bore, showing location of plugs, amount of cement in each, and amount of
  casing left in hole, and the current status of the surface restoration.

# DIVISION OF OIL, GAS AND MINING

# **SPUDDING INFORMATION**

Name of Company:	KERR-McGE	E OIL &	GAS ONSHO	<u>PRE, L. P.</u>				
Well Name:	NBU 9	920-23D						
Api No: 43-047	7-50574	Lease 7	Type:I	EDERAL				
Section 23 Township	098 Range	20E C	ountyl	UINTAH				
Drilling Contractor	PETE MA	RTIN DRI	L <b>G</b> RIC	G# <b>BUC</b>	CKET			
SPUDDED:								
Date	02/09/2010	-						
Time	9:00 AM							
How	DRY							
Drilling will Commence:								
Reported by	JAN	MES GOB	ER					
Telephone #	(435	5) 828-7014	1					
Date 02/09/20	10 Signed	d <u>CH</u>	D					

#### SIMIE UF UIME DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

<b>ENTITY</b>	ACTIO	N FORM
---------------	-------	--------

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

P.O. Box 173779

city DENVER

state CO zip 80217 Phone Number: (720) 929-6100

#### Well 1

API Number	Well I	Name	QQ Sec Twp			Rng County		
4304750574	NBU 92	20-23D	NWNW	23	98	20E	UINTAH	
Action Code	Current Entity Number	New Entity Number	Sı	Spud Date		Entity Assignment Effective Date		
В	99999	2900	2	2/9/2010	)	2	118/10	

MIRU PETE MARTIN BUCKET RIG.

WOMIVU

SPUD WELL LOCATION ON 2/9/2010 AT 9:00 HRS.

#### Well 2

API Number	Well	Well Name QQ Sec Twp Rng Count			QQ Sec Twp		
4304750575	NBU 9	NBU 920-15I		15	98	20E	UINTAH
Action Code	Current Entity New Entity Number Number		S	Spud Date			ity Assignment
В	99999	3900		2/9/2010	)	3	/18/10

Comments:

MIRU PETE MARTIN BUCKET RIG. WSmVA SPUD WELL LOCATION ON 2/9/2010 AT 15:00 HRS.

# Well 3

API Number	Well Name		Well Name QQ Sec Twp		Twp	Rng County		
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignmen Effective Date			
Comments:								

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- **B** Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section)

RECEIVED

FEB 1 0 2010

ΔN	JUA	'IV	TIE

Title

Name (Please Print)

Signature/ **REGULATORY ANALYST** 

2/10/2010

Date

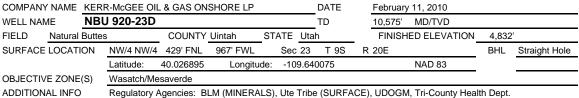
(5/2000)

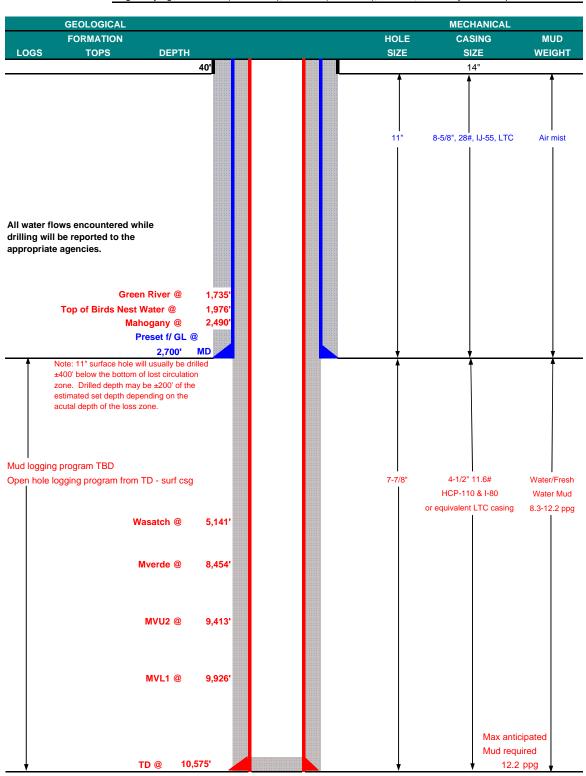
STATE OF UTAH		FORM 9
DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0577A
SUNDRY NOTICES AND REPORTS OF	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr
Do not use this form for proposals to drill new wells, significantly deepen existom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use DRILL form for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well		8. WELL NAME and NUMBER: NBU 920-23D
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047505740000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0429 FNL 0967 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWNW Section: 23 Township: 09.0S Range: 20.0E Meridian: S		COUNTY: UINTAH STATE:
11.		UTAH
CHECK APPROPRIATE BOXES TO INDICATE I	IATURE OF NOTICE, REPORT,	OR OTHER DATA
TYPE OF SUBMISSION	TYPE OF ACTION	
☐ ACIDIZE ☐	ALTER CASING	CASING REPAIR
NOTICE OF INTENT CHANGE TO PREVIOUS PLANS Approximate date work will start:	CHANGE TUBING	CHANGE WELL NAME
CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
✓ SPUD REPORT PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud: $\square$ reperforate current formation $\square$	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
☐ TUBING REPAIR ☐	VENT OR FLARE	WATER DISPOSAL
☐ DRILLING REPORT ☐ WATER SHUTOFF ☐	SI TA STATUS EXTENSION	APD EXTENSION
□ WILDCAT WELL DETERMINATION □	OTHER	OTHER:
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertine MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CON RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX R LOCATION ON 2/9/2010 AT 09:00	DUCTOR HOLE TO 40'. EADY MIX. SPUD WELL <b>A</b> HRS. <b>U</b>	•
NAME (PLEASE PRINT) PHONE NUMBER Andy Lytle 720 929-6100	TITLE Regulatory Analyst	

	STATE OF UTAH		FORM 9			
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0577A			
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	sals to drill new wells, significantly deepen e ugged wells, or to drill horizontal laterals. Us		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES			
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047505740000			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	Street, Suite 600, Denver, CO, 80217 3779	<b>PHONE NUMBER:</b> 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0429 FNL 0967 FWL			COUNTY: UINTAH			
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NWNW Section: 2:	IP, RANGE, MERIDIAN: 3 Township: 09.0S Range: 20.0E Meridian: S	5	STATE: UTAH			
11.	CK APPROPRIATE BOXES TO INDICATE	NATURE OF NOTICE, REPORT,	OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION				
	ACIDIZE [	ALTER CASING	CASING REPAIR			
NOTICE OF INTENT Approximate date work will start: 2/12/2010	✓ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME			
2/12/2010	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION			
	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK			
SPUD REPORT	☐ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION			
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON			
	☐ UBING REPAIR	VENT OR FLARE	☐ WATER DISPOSAL			
DRILLING REPORT Report Date:		SI TA STATUS EXTENSION	☐ APD EXTENSION			
	WILDCAT WELL DETERMINATION	OTHER	OTHER:			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  Kerr-McGee Oil & Gas Onshore LP (Kerr-McGee) respectfully requests to change the surface casing size for this well from FROM: 9-5/8" TO: 8-5/8".  Additionally, Kerr-McGee requests to change the cement for this well due to a revised drilling procedure. The production casing will still be cemented it's entire length to the surface. Please see the attached drilling program for additional details. All other information remains the same. Pleasete:  February 17, 2010  Contact the undersigned with any questions and/or comments. Thank you.  By:						
NAME (PLEASE PRINT) Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	TITLE Regulatory Analyst				
SIGNATURE N/A		<b>DATE</b> 2/11/2010				



# KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM







#### **KERR-McGEE OIL & GAS ONSHORE LP**

#### **DRILLING PROGRAM**

#### **CASING PROGRAM**

								I	DESIGN FACT	ORS
	SIZE	INT	ERVA	L	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"	C	)-40'							
								3,390	1,880	348,000
SURFACE	8-5/8"	0	to	2700	28.00	IJ-55	LTC	0.77*	1.49	4.60
								7,780	6,350	201,000
PRODUCTION	4-1/2"	0	to	9600	11.60	I-80	LTC	1.78	1.04	2.01
								10,690	8,650	279,000
		9600	to	10575	11.60	HCP-110	LTC	2.44	1.29	30.32

<sup>\*</sup>Burst on suface casing is controlled by fracture gradient as shoe with gas gradient above.

DF = 1.99

- 1) Max Anticipated Surf. Press.(MASP) (Surf Csg) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac grad x TVD of next csg point))
- 2) MASP (Prod Casing) = Pore Pressure at TD (0.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 12.2 ppg) 0.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MASP 4,262 psi

3) Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

(Burst Assumptions: TD = 12.2 ppg) 0.62 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

MABHP 6,588 psi

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE TAIL	500'	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1		+ 0.25 pps flocele				
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	260	0%	15.60	1.18
		+ 2% CaCl + 0.25 pps flocele				
		Premium cmt + 2% CaCl				
SURFACE		NOTE: If well will circulate water to sur	face, optic	n 2 will be	utilized	
Option 2 LEAD	2,200'	Prem cmt + 16% Gel + 10 pps gilsonite	200	35%	11.00	3.82
		+ 0.25 pps Flocele + 3% salt BWOC				
TAIL	500	Premium cmt + 2% CaCl	150	35%	15.60	1.18
		+ 0.25 pps flocele				
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION LEAD	4,635'	Premium Lite II + 0.25 pps celloflake +	370	40%	11.00	3.38
		5 pps gilsonite + 10% gel '+ 1% Retarder				
TAIL	5,940'	50/50 Poz/G + 10% salt + 2% gel	1450	40%	14.30	1.31
		+ 0.1% R-3				

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

# FLOAT EQUIPMENT & CENTRALIZERS

SURFACE

Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.

**PRODUCTION** 

Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint for a total of 15 bow spring centralizers.

#### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:		DATE:	
	John Huycke / Emile Goodwin	_	
DRILLING SUPERINTENDENT:		DATE:	
	John Merkel / Lovel Young	_	<u> </u>

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

	STATE OF UTAH		FORM 9			
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0577A			
	RY NOTICES AND REPORTS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr			
	sals to drill new wells, significantly deepe ugged wells, or to drill horizontal laterals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES			
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047505740000			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 377	<b>PHONE NUMBER:</b> 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0429 FNL 0967 FWL QTR/QTR, SECTION, TOWNSHI	IP RANGE MERIDIAN:		COUNTY: UINTAH			
	3 Township: 09.0S Range: 20.0E Meridiar	n: S	STATE: UTAH			
11. CHE	CK APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPORT,	OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION				
	☐ ACIDIZE	ALTER CASING	CASING REPAIR			
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME			
SUBSEQUENT REPORT	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS ☐ FRACTURE TREAT	☐ CONVERT WELL TYPE ☐ NEW CONSTRUCTION			
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK			
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION			
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON			
	☐ TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL			
✓ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	APD EXTENSION			
4/13/2010	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:			
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  FINISHED DRILLING FROM 2770' TO 10,641' ON 4/11/2010. RAN 4-1/2"  11.6# I-80 PRODUCTION CSG. CEMENT 4 1/2" AS FOLLOWS: PUMP 40 BBL **Accepted by the WATER. LEAD CMT W/545 SX CLASS G PREM LITE @ 12.3 PPG, 2.12 YIELD.**Utah Division of TAILED CMT W/1262 SX CLASS G 50/50 POZ MIXED @ 14.3 PPG, 1.31 YIE*ON, Gas and Mining WASH LINES, DROP PLUG & DISPLACE W/164 BBLS WATER W/ CLAYTHEOR RECORD ONLY MAGNACIDE TO BUMP PLUG W/4000, LIFT PSI 3300. HAD 14 BBL CEMENT TO SURFACE. FLUSH STACK, PACK OFF THE HANGER, CLEAN TANKS.  RELEASE ENSIGN 145 RIG AT 06:00 HRS ON 4/13/2010.						
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBE</b> 720 929-6100	R TITLE Regulatory Analyst				
SIGNATURE N/A		<b>DATE</b> 4/13/2010				

	STATE OF UTAH DEPARTMENT OF NATURAL RESOUR	CES	FORM 9		
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QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NWNW Section: 2:	P, RANGE, MERIDIAN: 3 Township: 09.0S Range: 20.0E Meridian	n: S	STATE: UTAH		
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	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION		
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
SPUD REPORT Date of Spud:	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud.	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
✓ DRILLING REPORT	U TUBING REPAIR		WATER DISPOSAL		
Report Date: 5/5/2010	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
3/3/2010	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:		
THE SUBJECT WEL 12:00 P.M. THE CHRO	MPLETED OPERATIONS. Clearly show all poll WAS PLACED ON PRODUCT DNOLOGICAL WELL HISTORY THE WELL COMPLETION RE	TION ON MAY 1, 2010 AT WILL BE SUBMITTED WITH PORT.  OI  FOR			
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBE</b> 720 929-6100	R TITLE Regulatory Analyst			
SIGNATURE N/A		<b>DATE</b> 5/3/2010			

	STATE OF UTAH							
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0577A					
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	☐ REPERFORATE CURRENT FORMATION ☐ TUBING REPAIR	SIDETRACK TO REPAIR WELL  VENT OR FLARE	☐ TEMPORARY ABANDON ☐ WATER DISPOSAL					
✓ DRILLING REPORT	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION					
Report Date: 3/2/2010								
	WILDCAT WELL DETERMINATION	OTHER	OTHER:					
12. DESCRIBE PROPOSED OR COMIRU PROPETRO AIR 2770'. RAN 8 5/8". PUMP 130 BBLS OF 11.0 PPG, 3.82 YIELD PPG, 1.15 YIELD CLAAND DISPLACE W/ 1 LIFT. LAND PLUG 10 OF CLASS G 15.8 PPG	accepted by the Utah Division of							
Laura Gianakos	<b>PHONE NUMBER</b> 307 752-1169	TITLE Regulatory Affairs Supervisor						
SIGNATURE N/A		<b>DATE</b> 3/2/2010						

	STATE OF UTAH							
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0577A					
SUNDE	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr							
	sals to drill new wells, significantly deepe ugged wells, or to drill horizontal laterals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES					
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 920-23D					
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047505740000					
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 377	<b>PHONE NUMBER:</b> 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES					
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0429 FNL 0967 FWL QTR/QTR, SECTION, TOWNSHI	IP RANGE MERIDIAN:		COUNTY: UINTAH					
	3 Township: 09.0S Range: 20.0E Meridiar	n: S	STATE: UTAH					
11. CHE	CK APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPORT,	OR OTHER DATA					
TYPE OF SUBMISSION		TYPE OF ACTION						
	☐ ACIDIZE	ALTER CASING	CASING REPAIR					
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME					
SUBSEQUENT REPORT	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS ☐ FRACTURE TREAT	☐ CONVERT WELL TYPE ☐ NEW CONSTRUCTION					
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK					
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION					
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON					
	☐ TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL					
✓ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	APD EXTENSION					
4/13/2010	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:					
FINISHED DRILLIN 11.6# I-80 PRODUCT WATER. LEAD CMT V TAILED CMT W/1262 WASH LINES, DROP F MAGNACIDE TO BUIL TO SURFACE. FLO	MPLETED OPERATIONS. Clearly show all per G FROM 2770' TO 10,641' ON FION CSG. CEMENT 4 1/2" AS N/545 SX CLASS G PREM LIT SX CLASS G 50/50 POZ MIXE PLUG & DISPLACE W/164 BBL MP PLUG W/4000, LIFT PSI 3 JSH STACK, PACK OFF THE H ENSIGN 145 RIG AT 06:00 HF	N 4/11/2010. RAN 4-1/2" S FOLLOWS: PUMP 40 BBL  E @ 12.3 PPG, 2.12 YIELD. ED @ 14.3 PPG, 1.31 YIEOD S WATER W/ CLAYTRE  300. HAD 14 BBL CEMENT IANGER, CLEAN TANKS.	Accepted by the Utah Division of					
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBE</b> 720 929-6100	R TITLE Regulatory Analyst						
SIGNATURE N/A		<b>DATE</b> 4/13/2010						

	STATE OF UTAH DEPARTMENT OF NATURAL RESOUR	CES	FORM 9		
	DIVISION OF OIL, GAS, AND MI		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0577A		
	RY NOTICES AND REPORTS		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr		
	sals to drill new wells, significantly deepe ıgged wells, or to drill horizontal laterals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 920-23D		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047505740000		
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	treet, Suite 600, Denver, CO, 80217 377	<b>PHONE NUMBER:</b> 9 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0429 FNL 0967 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NWNW Section: 2:	P, RANGE, MERIDIAN: 3 Township: 09.0S Range: 20.0E Meridian	n: S	STATE: UTAH		
11. CHE	CK APPROPRIATE BOXES TO INDICA	ATE NATURE OF NOTICE, REPORT,	OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	ACIDIZE	ALTER CASING	☐ CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION		
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
SPUD REPORT Date of Spud:	✓ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
Date of Spud.	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON		
✓ DRILLING REPORT	U TUBING REPAIR		WATER DISPOSAL		
Report Date: 5/5/2010	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
3/3/2010	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:		
THE SUBJECT WEL 12:00 P.M. THE CHRO	MPLETED OPERATIONS. Clearly show all poll WAS PLACED ON PRODUCT DNOLOGICAL WELL HISTORY THE WELL COMPLETION RE	TION ON MAY 1, 2010 AT WILL BE SUBMITTED WITH PORT.  OI  FOR			
NAME (PLEASE PRINT) Andy Lytle	<b>PHONE NUMBE</b> 720 929-6100	R TITLE Regulatory Analyst			
SIGNATURE N/A		<b>DATE</b> 5/3/2010			

Form 3160-4 (August 2007)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORTANCE OG

	WLLL	OWIFE		//\ I\I_\				-r OK					້ ບິ	TU0577A		
la. Type of	Well  Completion	Oil Well	☑ Gas	Well Worl	Dry Over	_	Other eepen	□ Pl	ug Back	7	Di . Re	svr.	6. If	Indian, Allo	ottee or	Tribe Name
		Other								-				nit or CA A TU63047		ent Name and No.
KERR-I	2. Name of Operator Contact: ANDY LYTLE KERR-MCGEE OIL&GAS ONSHOREFLE ail: andrew.lytle@anadarko.com										8. Lease Name and Well No. NBU 920-23D					
3. Address	3. Address P.O. BOX 173779 3a. Phone No. (include area code) Ph: 720-929-6100										9. AI	Pl Well No.		43-047-50574		
4. Location	of Well (Re	ort location	on clearly ar	d in acco	rdance	with Fed	eral req	uiremen	ts)*					ield and Po		Exploratory S
At surfa			967FWL 4			•							11. S	ec., T., R.,	M., or	Block and Survey 9S R20E Mer SLB
At total	rod interval r denth NW		NE 967FW						, 109.640	08 W I	Lon		12. C	County or Pa	_	13. State
14. Date Sp 02/09/2	oudded		15. D	ate T.D. I	Reache			16. Da	te Comple & A <b>2</b> 01/2010		y to Pr	od.		Elevations (	DF, KE 55 GL	3, RT, GL)*
18. Total D	epth:	MD TVD	1064 1063		19. Plu	ug Back 7	.D.:	MD TVD	10	0538 <del>0580</del>	10.5		th Bric	ige Plug Se		MD TVD
21. Type El	lectric & Oth STIC CBL-G	er Mechan R-SDL/D	ical Logs R SN/ACTR	un (Subn	nit copy	y of each)					Was w Was D	ell cored ST run? onal Sur		X No X No X No	Yes Yes	(Submit analysis) (Submit analysis) (Submit analysis)
23. Casing an	d Liner Reco	ord (Repo	t all strings	set in we	<i>ll)</i>					· · · · ·						
Hole Size	Size/G	rade	Wt. (#/ft.)	Top (MD		Bottom (MD)		Cement Depth		of Sks. of Cen		Slurry (BB)		Cement 7	Гор*	Amount Pulled
20.000	14.000	STEEL	36.7			4(					28					
11.000		325 IJ55	28.0	<del> </del>		2746	+				575					
7.875	4	.500 180	11.6		_	10626	4				1807			<del></del>		
					-		+-									
		<del></del>			_				<del> </del>							
24. Tubing	Record			·												
	Depth Set (M		cker Depth	(MD)	Size	Dep	th Set (1	MD)	Packer De	epth (M	(D)	Size	De	pth Set (MI	2)	Packer Depth (MD)
2.375 25. Producin		9914		L		1 26	Derfor	ation Re	oord				<u> </u>			
	ormation		Тор	- 1	Botto						Т	Size	Τ,	lo. Holes		Perf. Status
A)	WASA	тсн	100	7624		8128		Citorau				0.36				
B)	MESAVE	î		8964		0494			8964 T		$\neg$	0.36	-		OPE	
C)																
D)																
	acture, Treat Depth Interva	·····	ent Squeez	e, etc.			····		Amount an	od Trans	a of M	nterial				
			28 PMP 2,	114 BBLS	SLICK	( H20 & 96	3,494 LE			штурс	C OI WI	attriai				
			94 PMP 5,													
												•				
20 D 1	T-+1	<u> </u>		·												
Date First	on - Interval	Hours	Test	Oil	Gas	, T	Water	Oil	Gravity		Gas	1	Producti	on Method		
Produced	Date	Tested	Production	BBL	MC	CF .	BBL 552.	Cor	r. API		Gravity				e EDC	DAA MARTI I
05/01/2010 Choke	05/03/2010 Tbg. Press.	24 Csg.	24 Hr.	O.0 Oil	Gas	2177.0	Water		s:Oil		Well Sta	itus		FLOV	VS FRC	OM WELL
Size 20/64	Flwg. 1625 SI	Press. 2500.0	Rate	BBL 0	MC		BBL 552	Rat				3W				
28a. Produc	tion - Interva	1 B														
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MC		Water BBL		Gravity rr. API		Gas Gravity		Producti	on Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MC		Water BBL	Gas Rat	s:Oil io		Well Sta	itus				

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #87145 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\*

28b. Produ	iction - Interv	al C					<u></u>			<del></del>	· · · · · · · · · · · · · · · · · · ·
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gra	s vity	Production Method	
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	We	ll Status	J	
28c. Produ	ction - Interv	al D		<u> </u>	1	<u> </u>	<u></u>				
Pate First roduced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gra	s vity	Production Method	
hoke ize	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	We	ll Status		
29. Dispos SOLD		Sold, used	for fuel, vent	ed, etc.)							
Show a tests, in	all important	zones of r	oclude Aquife porosity and cotested, cushio	ontents there	of: Cored in tool open,	ntervals and flowing and	all drill-stem l shut-in pressu	ıres	31. Fo	rmation (Log) Markers	
	Formation		Тор	Bottom		Description	ons, Contents,	etc.		Name	Top Meas. Deptl
GREEN RIGIRED'S NEW MAHOGAI WASATCH MESAVER	EST NY H RDE	(include I	1749 1873 2489 5143 8386	8357 10641 edure): NL WELL H		ND FINAL	SURVEY.				
1. Ele		anical Log	gs (1 full set ro			Geologie     Core An	-		3. DST Ro	eport 4. Dir	ectional Survey
34. I hereb	by certify that	the foreg	Elect	tronic Subn	ission #871	145 Verified	rrect as determ I by the BLM ONSHORE, I	Well Infor	mation Sy		ructions):
Name	(please print)	ANDY L	YTLE				Title	REGULA	TORY AN	NALYST	
Signat	ture	Etectro	nic Sabmiss	ion)			Date	o5/28/20	10		
Title 18 II	LS C. Section	1001 and	Title 43 U.S.	C. Section 1	212. make	it a crime fo	r any person k	nowingly a	nd willfull	y to make to any departmen	t or agency

# 1 General

# 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

# 1.2 Well Information

Well	NBU 920-23D	Wellbore No.	OH
Well Name	NBU 920-23D	Common Name	NBU 920-23D
Project	UTAH-UINTAH	Site	NBU 920-23D
Vertical Section Azimuth	0.00 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	2/24/2010	UWI	NW/NW/0/9/S/20/E/23/0/0/6/PM/N/429.00/W/0/ 967.00/0/0
Active Datum	RKB @4,848.00ft (above Mean Sea Level)		

# 2 Survey Name

# 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	PRP PETRO
Started	2/23/2010	Ended	3/30/2010
Tool Name	TOT	Engineer	Anadarko

# 2.1.1 Tie On Point

MD	inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
( <b>n</b> )	0.00	0.00	0.00	0.00	0.00

# 2.1.2 Survey Stations

Date	Туре	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
2/23/2010	Tie On	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/23/2010		479.00	0.20	292.90	479.00	0.33	-0.77	0.33	0.04	0.04	0.00	292.90
2/24/2010		1.029.00	0.40	4.00	1.028.99	2.61	-1.52	2.61	0.07	0.04	12.93	100.54
	NORMAL	1,509.00	1.00	134.00	1.508.97	1.38	1.61	1.38	0.27	0.13	27.08	143.70
	NORMAL	1,989.00	0.90	279.00	1.988.94	-0.94	0.90	-0.94	0.38	-0.02	30.21	163.45
2/25/2010		2,725.00	1.70	189.70	2,724.81	-10.80	-6.65	-10.80	0.26	0.11	-12.13	-117.34

# 2.2 Survey Name: Survey #2

Survey Name	Survey #2	Company	EXTREME
Started	3/31/2010	Ended	
Tool Name	EM	Engineer	Anadarko

# 2.2.1 Tie On Point

MD	inc	Azi	TVD	N/S	E/W	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	
2,725.00	1.70	189.70	2,724.81	-10.80		

# 2.2.2 Survey Stations

Date Type	MD (ft)	inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
3/31/2010 Tie On	2,725.00	1.70	189.70	2.724.81	-10.80	-6.65	-10.80	0.00	0.00	0.00	0.00
	2,956.00	2.29	175.48	2,955.67	-18.78	-6.86	-18.78	0.33	0.26	-6.16	-47.25
4/2/2010 NORMAL	3,500.00	0.97	157.81	3,499,44	-33.88	-4.27	-33.88	0.26	-0.24	-3.25	-167.83
NORMAL	- *	1.76	204.84	4.495.17	-55.57	-7.51	-55.57	0.13	0.08	4.72	79.88
4/3/2010 NORMAL	4,496.00	1.70	184.97	4,992.96	-69.74	-11.35	-69.74	0.12	-0.02	-3.99	-108.45
NORMAL	4,994.00		165.20	5.491.81	-81.78	-10.71	-81.78	0.14	-0.11	-3.96	-1 <b>4</b> 7.15
NORMAL	5,493.00	1.14	160.36	6.034.64	-94.45	-6.67	-94.45	0.10	0.10	-0.89	-15.05
4/4/2010 NORMAL	6,036.00	1.67		6.533.46	-107.07	-2.13	-107.07	0.05	-0.05	-0.07	-178.10
NORMAL	6,535.00	1.41	160.01	- * .	-119.99	1.13	-119.99	0.08	0.05	2.15	53.38
NORMAL	7,033.00	1.67	170.73	7,031.28		3.84	-133.08	0.06	-0.05	-1.06	-154.04
NORMAL	7,531.00	1.41	165.46	7,529.10	-133.08		-146.76	0.05	0.05	0.61	19.67
4/5/2010 NORMAL	8,053.00	1.67	168.62	8,050.91	-146.76	6.95		0.03	-0.11	-0.75	-172.38
4/6/2010 NORMAL	8,528.00	1.14	165.04	8,525.77	-158.11	9.54	-158.11		0.04	4.55	77.49
NORMAL	8,968.00	1.32	185.06	8,965.67	-167.38	10.22	-167.38	0.11	-		-96.76
4/11/2010 NORMAL	10,611.00	1.60	143.30	10,608.18	-204.63	22.26	-204.63	0.07	0.02		0.00
NORMAL	10,641.00	1.60	143.30	10,638.17	-205.30	22.76	-205.30	0.00	0.00	0.00	0.00

# **Operation Summary Report**

Well: NBU 920-23D	Spud Conductor: 2/9/2010	Spud Date: 2/24/2010
Project: UTAH-UINTAH	Site: NBU 920-23D	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 2/23/2010	End Date: 4/13/2010

	Time		Phase	Code	Sub	P/U	MD From	N/429.00/W/0/967.00/0/0  Operation
Date	Start-End	Duration (hr)	Filase	Code	Code		(ft)	Орегация
2/23/2010	6:00 - 20:00	14.00	MIRU	01	Α	Р		MOVE RIG TO NBU 920-23D
	20:00 - 0:00	4.00	MIRU	02	В	Р		DRILL F/ 40' - 510' WOB 20 ROT 40 MUD MOTOR 104 DHR 144 GPM 650 NO LOSSES PU/DN/ROT 23/23/23 SPUD WELL 2-23-2010 @ 2000
2/24/2010	0:00 - 2:30	2.50	DRLSUR	02	В	Р		DRILL F/ 510' - 810' WOB 20 ROT 40 MUD MOTOR 104 DHR 144 GPM 650 NO LOSSES PU/DN/ROT 30/30/30
	2:30 - 4:00	1.50	DRLSUR	80	В	Z		WORK ON MUD PUMP
	4:00 - 17:00	13.00	DRLSUR	02	В	Р		DRILL F/ 810' - 2040' WOB 20 ROT 40 MUD MOTOF 104 DHR 144 GPM 650 NO LOSSES PU/DN/ROT 30/30/30 SURVEY 1020' .4/4 1500' 1/134 1980' .9/27
	17:00 - 0:00	7.00	DRLSUR	80	В	Z		MUD PUMP DOWN, CONTROL BOX MALFUNCTION
2/25/2010	0:00 - 2:00	2.00	DRLSUR	80	Α	Z		MUD PUMP DOWN CONTROL PANEL MALFUNCTION
	2:00 - 12:00	10.00	DRLSUR	02	В	Р		DRILL F/ 2040' - 2770' T.D. 2-25-2010 @1200 WOB 20 ROT 40 MUD MOTOR 104 DHR 144 GPM 650 NO LOSSES PU/DN/ROT 62/62/62
	12:00 - 14:00	2.00	DRLSUR	05	Α	Р		CIRCULATE AND CONDITION MUD, RUN SURVEY @ 2716' 1.7/189.7
	14:00 - 19:00	5.00	DRLSUR	06	Α	Р		LDDS
	19:00 - 19:30	0.50	DRLSUR	12	Α	Р		RIG UP TO RUN CASING
	19:30 - 23:30	4.00	DRLSUR	12	С	Р		RUN 62 JTS 8.625 32# J-55 8RD-LTC CASING SHOE AT 2736' BAFFEL AT 2692.2
	23:30 - 0:00	0.50	DRLSUR	12	В	P		RIG UP CEMENTERS RELEASE RIG 11:59 2-25-2010 TEST LINES TO 2000' PSI, PUMP 130 BBLS OF H20, PUMP 20 BBLS OF GEL WATER. PUMP 250 (170 BBLS) SX OF 11#, 3.82 YD, 23 GAL SX HI FILL LEAD CEMENT. PUMP 200 SX (135 BBLS) OF 15.8#, 1.15 YD, 5 GAL/SK TAIL CEMENT. DROP PLUG ON FLY AND DISPLACE W/ 165 BBLS OF 8.3# H20, 15BBLS OF LEAD TO SURFACE W/ 490 PSI OF LIFT @ 5 BBLS/MIN. W/ LAND PLUG 1000 PSI AND CHECK FLOAT. FLOAT HELD. PUMI 125 SX (15.1 BBLS) OF 4% CALC 15.8# 1.15 YD, 5 GAL/SK CEMENT DOWN 1". FILL TO SURFACE. BUMPED PLUG 2-26-2010 @ 02:30 FINISH JOB AT 04:00
3/30/2010	8:00 - 0:00	16.00	DRLPRO	01	В	Р		RD, MOVE CAMPS & PIPE TUBS
3/31/2010	0:00 - 7:00	7.00	RDMO	01	Α .	P		WAIT ON DAYLIGHT. RDRT AND PREPARE RIG TO MOVE THIS AM.
	7:00 - 16:00	9.00	MIRU	01	Α	Р		MOVE DERRICK, SUB, & BACKYARD TO LOCATION. SET DERRICK WITH JC CRANE DUE TO SHORT LOCATION. RELEASED THE JONES TRUCKS AT 16:00 HRS.
	16:00 - 18:00	2.00	MIRU	01	Α	Р		RURT. HOOK UP AIR, ELECTRICAL, WATER, STEAM ETC.
	18:00 - 19:00	1.00	MIRU	01	Α	Р		HOOK UP, BLEED DERRICK RAMS, INSPECT DERRICK PRIOR TO RAISING.
	19:00 - 0:00	5.00	MIRU	80	Α	Z		IVECO WILL NOT RAISE DERRICK. RAMS EXTEN 5' AND BLEED BACK OFF. TROUBLE SHOOT PROBLEM.
4/1/2010	0:00 - 13:00	13.00	MIRU	80	Α	Z		IVECO WILL NOT RAISE DERRICK. RAMS EXTEN 5' AND BLEED BACK OFF. TROUBLE SHOOT PROBLEM.

# **Operation Summary Report**

Well: NBU 920	-23D		Spud Co	nductor:	2/9/201	0	Spud Date: 2/	724/2010
Project: UTAH	-UINTAH		Site: NB	J 920-23	3D			Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLII			Start Dar					End Date: 4/13/2010
Active Datum:	RKB @4,848.00ft (	above Mear	Sea Leve	UWI: N	W/NW/0	)/9/S/20/	E/23/0/0/6/PM/N	N/429.00/W/0/967.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	13:00 - 20:00	7.00	MIRU	01	A	Р		RAISE DERRICK, SLIP DRILL LINE ONTO DRUM, SET IDM, LOWER BLOCKS AND HOOK UP BECKET. SET CAT WALK, RU FLOOR. NU CHOKE LINE, CHARGE ACCUMULATOR, CHANGE OIL IN TOP DRIVE.
	20:00 - 0:00	4.00	MIRU	15	Α	Р		TEST BLIND RAMS, PIPE RAMS, FLOOR VALVES, CHOKE AND ALL RELATED VALVES TO 250 AND 5000 PSI. TEST HYDRIL TO 250 AND 2500 PSI. TEST CSG TO 1500 PSI FOR 30 MINUTES.
4/2/2010	0:00 - 0:30	0.50	MIRU	15	Α	Р		FINISH TESTING BOP'S, SET THE WEAR BUSHING.
	0:30 - 6:00	5.50	DRLPRO	06	Α	Р		PU BHA, Q506F, .208 RPG, 1.5 DEG BH MM, MONEL, MWD, MONEL, 6 DC'S, 18 HWDP, TIH WITH SAME.
	6:00 - 8:00	2.00	DRLPRO	02	F	Р		DRILL SHOE TRACK.
	8:00 - 13:30	5.50	DRLPRO	02	В	Р		DRILL 2779'-3278' (499') 90.7'/HR. WOB-15-20, SPP-1350-1850, GPM-490, BIT RPM 140, MOTOR RPM-104 , DIF- 200-300, MW-9.8, VIS-32
	13:30 - 14:00	0.50	DRLPRO	07	A	P		SERVICE RIG
į	14:00 - 14:30	0.50	DRLPRO	02	В	Р		DRILL 3278'-3323' (45') 88'/HR. WOB-15-20, SPP-1350-1850, GPM- 490, BIT RPM 140, MOTOR RPM-104 , DIF- 200-300, MW-9.8, VIS-32
	14:30 - 18:00	3.50	DRLPRO	06	G	Z		LOST 600 PSI PUMP PSI, CHECK SURFACE EQUIPMENT. POOH WITH A WET STRING LOOKING FOR WASH OUT. FOUND WASHED OUT LOCKING SCREW IN THE GAP SUB. LAY DOWN SAME.
	18:00 - 21:00	3.00	DRLPRO	06	G	Z		WAIT ON EXTREME. CHANGE OUT THE GAP SUB, REPROGRAM EM TOOL. INSTALL EM TOOL AND SCRIBE THE MOTOR.
	21:00 - 23:30	2.50	DRLPRO	06	G	Z		TRIP IN THE HOLE.
	23:30 - 0:00	0.50	DRLPRO	02	В	Р		DRILL 3323'-3368' (45') 90'/HR. WOB-15-20, SPP-1700-2100, GPM- 490, BIT RPM 140, MOTOR RPM-104, DIF- 200-300, MW-9.8, VIS-32
4/3/2010	0:00 - 13:00	13.00	DRLPRO	02	В	Р		DRILL 3368'-4818' (1450') 111.5'/HR. WOB-15-20, SPP-1700-2100, GPM- 490, BIT RPM 140, MOTOR RPM-104, DIF- 200-400, MW-9.8, VIS-32
	13:00 - 13:30	0.50	DRLPRO	07	Α	Р		RIG SERVICE
	13:30 - 0:00	10.50	DRLPRO	02	В	Р		DRILL 4818'-5895' (1077') 102.57'/HR. WOB-15-20, SPP-2200-2600, GPM- 490, BIT RPM 140, MOTOR RPM-104, DIF- 200-400, MW-10.0, VIS-38
4/4/2010	0:00 - 11:00	11.00	DRLPRO	02	В	P		DRILL 5895'-6766' (871') 79.1'/HR. WOB-15-20, SPP-2200-2600, GPM- 490, BIT RPM 140, MOTOR RPM-104, DIF- 200-400, MW-10.2, VIS-38. LOST 60 BBLS MUD @ 6559', SWEEP W/ LCM PILL TO REGAIN FULL RETURNS.
	11:00 - 11:30	0.50	DRLPRO	07	Α	Р		RIG SERVICE
	11:30 - 0:00	12.50	DRLPRO	02	В	P		DRILL 6766'-7462' (696') 55.6'/HR. WOB-15-20, SPP-2200-2600, GPM- 490, BIT RPM 140, MOTOR RPM-104 , DIF- 200-400, MW-10.2, VIS-38
4/5/2010	0:00 - 12:30	12.50	DRLPRO	02	В	Р		DRILL 7462'-7989' (527') 42.1'/HR. WOB-15-20, SPP-2300-2650, GPM- 490, BIT RPM 140, MOTOR RPM-104 , DIF- 200-350, MW-10.9, VIS-38
	12:30 - 13:00	0.50	DRLPRO	07	Α	Р		RIG SERVICE
	13:00 - 0:00	11.00	DRLPRO	02	В	Р		DRILL 7989'-8360' (371') 33.7 '/HR. WOB-15-20, SPP-2450-2750, GPM- 490, BIT RPM 140, MOTOR RPM-104 , DIF- 200-300, MW-11.2, VIS-43
4/6/2010	0:00 - 10:30	10.50	DRLPRO	02	В	Р		DRILL 8360'-8712' (352') 33.5 '/HR. WOB-18-24, SPP-2450-2750, GPM- 460, BIT RPM 140, MOTOR RPM-96 , DIF- 200-300, MW-11.6, VIS-43

# **Operation Summary Report**

Well: NBU 920-23D	Spud Conductor: 2/9/2010	Spud Date: 2/24/2010
Project: UTAH-UINTAH	Site: NBU 920-23D	Rig Name No: PROPETRO/, ENSIGN 145/145
Event: DRILLING	Start Date: 2/23/2010	End Date: 4/13/2010

Event: DRILLII	NG		Start Dat	e: 2/23/	2010			End Date: 4/13/2010	
Active Datum:	RKB @4,848.00ft (	above Meai	n Sea Leve	UWI: N	W/NW/0	/9/S/20/I	E/23/0/0/6/PM/N	N/429.00/W/0/967.00/0/0	
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation	
	10:30 - 12:00 12:00 - 13:30	1.50	DRLPRO DRLPRO	05 02	В	X P		LOST FULL RETURNS, SHUT PUMPS DOWN AND LET HOLE HEAL WHILE MIXING LCM TO 5% IN THE PITS. CIRC. LCM AT SPR, CIRCULATE W. FULL RETURNS. LOST TOTAL OF 34 BBLS MUD. DRILL 8712'-8752' (40') 26.6'/HR. WOB-18-24, SPP-2650-2950, GPM- 460, BIT RPM 140, MOTOR RPM-96, DIF- 200-300, MW-11.9, VIS-43, LCM 5%	
	13:30 - 14:00	0.50	DRLPRO	07	Α	Р		RIG SERVICE	
4/7/2010	14:00 - 0:00 0:00 - 6:00	10.00 6.00	DRLPRO	02 02	В	P P		DRILL 8752'-9079' (327') 32.7'/HR. WOB-18-24, SPP-2650-2950, GPM- 460, BIT RPM 140, MOTOR RPM-96, DIF- 100-250, MW-12.2, VIS-43, LCM 6%	
4///2010	6:00 - 7:00	1.00	DRLPRO	05	С	Р		DRILL 9079'-9256' (177') 29.5'/HR. WOB-18-24, SPP-2650-2950, GPM- 460, BIT RPM 140, MOTOR RPM-96, DIF- 100-250, MW-12.2, VIS-43, LCM 6% CIRCULATE BOTTOMS UP, MIX AND PUMP A	
								SLUG.	
	7:00 - 17:00	10.00	DRLPRO	06	Α	Р		POOH, WASH AND REAM THROUGH TIGHT SPOTS AT 6231'-6200', 5128'-4800', 4563'-4480' AND 3922', INCREASE LCM TO 10% DUE TO 100 BBLS LOSS WHILE REAMING. MIX AND PUMP A SLUG. POOH. LKD MOTOR, BIT AND STAB. FUNCTION BLIND RAMS.	
	17:00 - 0:00	7.00	DRLPRO	06	Α	P		MAKE UP Q506F PDC ON 1 1/2 DEG, .16 RPG MTR AND BHA. SCRIBE SAME. TIH REAM TIGHT HOLE 4478'-5051', MW 12.4, VIS 40, LCM 12%	
4/8/2010	0:00 - 8:00	8.00	DRLPRO	06	Α	P		TIH, REAM TIGHT SPOTS FROM 5051', 5152'-5208', 5800'-5918', 5921'-6006', 6040'-6097', 6624', 7276'-7344', 7580'-7618', FIH. REAM 65' TO BOTTOM.	
	8:00 - 11:30	3.50	DRLPRO	02	В	Р		DRILL 9256'-9331' (75') 21.4'/HR. WOB-18-24, SPP-2650-2950, GPM- 407, BIT RPM 110, MOTOR RPM-65, DIF- 20-500, MW-12.5, VIS-43, LCM 9%	
	11:30 - 12:00	0.50	DRLPRO	07	Α	Р		RIG SERVICE	
	12:00 - 21:00	9.00	DRLPRO	02	В	Р		DRILL 9331'-9497' (166') 18.4'/HR. WOB-18-24, SPP OFF-2150-2450, ON BTM 2450-2500 GPM-420, BIT RPM 67, MOTOR RPM-73, DIF- 50-250, MW-12.5, VIS-43, LCM 9%.	
	21:00 - 21:30	0.50	DRLPRO	05	С	Р		CIRCULATE BOTTOM UP, MIX AND PUMP A SLUG.	
	21:30 - 0:00	2.50	DRLPRO	06	Α	Р		PULL OUT OF THE HOLE TO INSPECT BIT AND MOTOR DUE TO SLOW P-RATE AND ERATIC OFF BOTTOM PSI SWINGS FROM 2100 TO 2500 PSI @ 407 GPM AND 2650 TO 3300 PSI @ 460 GPM.	
4/9/2010	0:00 - 5:30	5.50	DRLPRO	06	Α	Р		FINISH POOH, LD EM TOOL, MOTOR AND BIT. NO VISIBLE DAMAGE TO MOTOR OR BIT.	
	5:30 - 14:30	9.00	DRLPRO	06	Α	Р		PU NEW Q506F, NEW 1.5 DEG, .16 RPG MOTOR AND TIH WITH SAME. WASH THROUGH TIGHT SPOT AT 8336'. FIH. W/R 80' TO BOTTOM.	
	14:30 - 20:00	5.50	DRLPRO	02	В	Р		DRILL 9497'-9598' (101') 18.3'/HR. WOB-18-24, SPP 2400-2700, 450 GPM-420, BIT RPM 112, MOTOR RPM-67, DIF- 50-350, MW-12.6, VIS-43, LCM 9%.	
	20:00 - 20:30	0.50	DRLPRO	07	Α	Р		RESET PECO COM'S, MAKE CONNECTION.	
4/10/2010	20:30 - 0:00 0:00 - 7:00	3.50 7.00	DRLPRO DRLPRO	02 02	В	P		DRILL 9598'-9711' (113') 32.2'/HR. WOB-18-24, SPP 2400-2700, 450 GPM-420, BIT RPM 112, MOTOR RPM-67, DIF- 200-400, MW-12.4, VIS-43, LCM 9%. DRILL 9711'-9912' (201') 28.7'/HR. WOB-18-24, SPP	
	7:00 - 7:30	0.50	DRLPRO	23	A	P		2400-2700, 450 GPM-420, BIT RPM 112, MOTOR RPM-67, DIF- 200-400, MW-12.5, VIS-43, LCM 9%. RESET PECO C.O.M.S. ZERO BIT WT. DIFF PSI, TAKE SPR.	

# **Operation Summary Report**

		1,12,00		•			ary Itoport		
Well: NBU 920			Spud Co			0	Spud Date: 2/2		
Project: UTAH-	-UINTAH		Site: NBI	U 920-23	3D			Rig Name No: PROPETRO/, ENSIGN 145/145	
Event: DRILLI			Start Dat					End Date: 4/13/2010	
Active Datum:	RKB @4,848.00ft	(above Mean	Sea Leve	UWI: N	W/NW/0	/9/S/20/	/E/23/0/0/6/PM/N/429.00/W/0/967.00/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation	
	7:30 - 12:30 12:30 - 13:00	5.00 0.50	DRLPRO DRLPRO	02 07	B A	P P		DRILL 9912'-10048' (136') 27.2'/HR. WOB-18-24, SPF 2400-2700, 420 GPM-420, BIT RPM 112, MOTOR RPM-67, DIF- 50-400, MW-12.4, VIS-43, LCM 7%. RIG SERVICE	
	13:00 - 18:00		DRLPRO	02	В	Р		DRILL 10048'-10175' (127') 25.4'/HR. WOB-18-24, SPP 2400-2700, 450 GPM-420, BIT RPM 112, MOTOR RPM-67, DIF- 50-300, MW-12.3, VIS-43, LCM 7%.	
	18:00 - 18:30	0.50	DRLPRO	23	Α	Р		RESET PECO C.O.M.S. ZERO BIT WT. DIFF PSI, TAKE SPR.	
	18:30 - 0:00	5.50	DRLPRO	02	В	Р		DRILL 10175'-10310' (135') 24.5'/HR. WOB-22-26, SPP 2250-2600, 450 GPM-420, BIT RPM 112, MOTOR RPM-67, DIF- 50-350, MW-12.2, VIS-43, LCM 7%.	
4/11/2010	0:00 - 11:30	11.50	DRLPRO	02	В	P		DRILL 10310'-10641' (331') 28.7'/HR. WOB-22-26, SPP 2250-2600, 450 GPM-420, BIT RPM 112, MOTOR RPM-67, DIF- 50-350, MW-12.4, VIS-46, LCM 7%.	
	11:30 - 12:00	0.50	DRLPRO	05	С	Р		RIG SERVICE	
	12:00 - 13:00	1.00	DRLPRO	05	С	P		CIRCULATE BOTTOMS UP WITH HIGH VIS SWEEP @ 14.0 PPG.	
	13:00 - 16:00	3.00	DRLPRO	06	E	Р		SHORT TRIP 20 STANDS.	
	16:00 - 18:30	2.50	DRLPRO	05	С	Р		CIRCULATE BOTTOMS UP TWICE, DROP SINGLE SHOT SURVEY, LET FALL, TAKE SURVEY, PUMP A SLUG.	
	18:30 - 0:00	5.50	DRLPRO	06	Α	Р		POOH LAYING DOWN THE DRILL SRTING.	
4/12/2010	0:00 - 4:30	4.50	DRLPRO	06	Α	Р		POOH LDDS	
	4:30 - 5:00	0.50	DRLPRO	14	В	Р		PULL THE WEAR BUSHING.	
	5:00 - 11:00	6.00	DRLPRO	11	D	Р		HELD SAFETY MEETING WITH HALLIBURTON, RU AND RIH WITH TRIPLE COMBO AND BRIDGED OUT AT 6846', LOG OUT 6846' TO SHOE, RAN GR TO SURFACE.	
	11:00 - 12:00	1.00	DRLPRO	12	Α	Р		HELD SAFETY MEETING WITH WEATHERFORD, RU CASING CREW.	
	12:00 - 19:30	7.50	DRLPRO	12	С	Р		RUN CSG. AS FOLLOWS: FLOAT SHOE, 1 JT. CSG. FLOAT COLLAR, 24 JTS. P-110 LTC, CSG. 8' XO, 106 JTS. I-80 BTC, MARKER JT. SET AT 5112', 121 JTS. 4 1/2" 11.6 PPF I-80 BTC CSG. OAL 10626, SET AT 10626. CENTRALIZED WITH 15 BOW SPRINGS, 1 ON FIRST 3 JTS. THEN EVERY 3RD JT. INSTALL HANGER AND LAND CSG.	
	19:30 - 21:30	2.00	DRLPRO	05	D	Р		INSTALL PLUG RETAINER, CIRCULATE BOTTOMS UP WITH RIG PUMP. HELD SAFETY MEETING WITH BJ.	
	21:30 - 0:00	2.50	DRLPRO	12	E	Р		SWITCH TO BJ, TEST LINES TO 5000 CEMENT 4 1/2" AS FOLLOWS: 40 BBLS WATER, LEAD W/ 545 SKS PL2 MIXED @ 12.3 PPG, YIELD 2.12, TAIL W/ 1262 SKS 50:50 POZ MIXED @ 14.3PPG, YIELD 1.31, WASH LINES, DROP PLUG & DISPLACE W/164 BBLS WATER W/ CLAYTREAT & MAGNACIDE TO BUMP PLUG W/ 4000, LIFT PSI 3300. HAD 14 BBL CEMENT TO SURFACE.	
4/13/2010	0:00 - 1:00	1.00	CSG	14	Α .	Р		FLUSH BOP STACK, REMOVE SETTING TOOL, PACK OFF WELL HEAD.	
	1:00 - 6:00	5.00	CSG	14	Α	P		CLEAN THE MUD TANKS, RELEASE THE RIG AT 06:00, 4-13-2010	

ell: NBU 920	0-23D		Spud Co	nductor	2/9/201	0	Spud Date: 2/	the state of the s
oject: UTAH			Site: NBI	U 920-23	3D			Rig Name No: PROPETRO/, ENSIGN 145/145
ent: DRILLI	NG		Start Dat	le: 2/23/	2010			End Date: 4/13/2010
ive Datum	(above Mean	Sea Leve	UWI: N	W/NW/C	/9/S/20/	E/23/0/0/6/PM/N	N/429.00/W/0/967.00/0/0	
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	6:00 - 6:00	0.00	CSG					CONDUCTOR CASING: Cond. Depth set: Cement sx used:
								SPUD DATE/TIME: 12/27/2009 15:30
								SURFACE HOLE: 11" Surface From depth:40 Surface To depth: 2,736 Total SURFACE hours: 29.50 Surface Casing size8.625" # of casing joints ran: 62 Casing set MD:2,736.0 # sx of cement:575 Cement blend (ppg:)11
								Cement yield (ff3/sk): 3.82 # of bbls to surface: 15 Describe cement issues: Describe hole issues:
								PRODUCTION: 7.875" Rig Move/Skid start date/time: 3/30/2010 8:00 Rig Move/Skid finish date/time: 4/1/2010 20:00 Total MOVE hours: 60.0 Prod Rig Spud date/time: 4/2/2010 6:00 Rig Release date/time: 4/13/2010 6:00 Total SPUD to RR hours: 264.0 Planned depth MD 10,641 Planned depth TVD 10,639 Actual MD: 10,641 Actual TVD: 10,638 Open Wells \$: \$981,471 AFE \$: \$999,074 Open wells \$/ft:\$92.23
								PRODUCTION HOLE: 7.875" Prod. From depth: 2,736 Prod. To depth:10,575 Total PROD hours: 160.5 Log Depth: 6846 Production Casing size: 4 1/2 # of casing joints ran: 252 Casing set MD:10,626.00 # sx of cement:545 / 1262 Cement blend (ppg:)12.3 / 14.3 Cement yield (ft3/sk): 2.12 / 1.31 Est. TOC (Lead & Tail) or 2 Stage: 0 / 4632 Describe cement issues: NONE Describe hole issues: NONE
								DIRECTIONAL INFO: KOP: Max angle: Departure: Max dogleg MD:

# US ROCKIES REGION Operation Summary Report

Well: NBU 920-23D	Spud Conductor: 2/9/2010	Spud Date: 2/24/2010
Project: UTAH-UINTAH	Site: NBU 920-23D	Rig Name No: GWS 1/1
Event: COMPLETION	Start Date: 4/28/2010	End Date: 4/30/2010
		00/E/00/010/01DEATEL/400 00AA/0100C7 00/010

Active Datum: F	RKB @4 848.00ft (a	above Mean	Sea Leve	UWI: N	W/NW/0	/9/S/20/E	E/23/0/0/6/PM/N	N/429.00/W/0/967.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/26/2010	7:00 - 15:00	8.00	COMP	30	А	Р		[DAY1] JSAP/U TBG  ROAD RIG FROM NBU 920-23F TO NBU 920-23D. MIRU, SPOT EQUIPMENT. NDWH, NUBOP. R/U FLOOR & TBG EQUIPMENT. P/U 3-7/8" MILL & NEW 2-3/8" L-80 TBG & RIH. [SLM] EOT @ 9963'.  NOTE: PRIOR TO MIRU. HLBRTN RAN A CBL-CCL-GR LOG FROM 10,540 TO SURFACE. EST CMT TOP @ SURFACE. MAX TEMP 228*.
4/27/2010	7:00 - 15:00	8.00	COMP	30		Р		3P SWF SDFN JSAPOOH W/ TBG.

[DAY2] EOT @ 9963'. POOH STDG BACK TBG. L/D BHA. R/D FLOOR & TBG EQUIPMENT. NDBOP, N/U FRAC VALVES.

MIRLI B&C TESTERS P. T. 4-1/2" CSG & FRAC

MIRU B&C TESTERS. P.T. 4-1/2" CSG & FRAC VALVES TO 7000#. [HELD GOOD] RDMO B&C QUICK TEST.

3PM SWISDEN. PREP TO FRAC IN AM.

5/28/2010 11:58:01AM

# **Operation Summary Report**

Well: NBU 920-23D	Spud Conductor: 2/9/2010 Spud Conductor: 2/9/2010	oud Date: 2/24/2010	
Project: UTAH-UINTAH	Site: NBU 920-23D	Rig Name No: GWS 1/1	
Event: COMPLETION	Start Date: 4/28/2010	End Date: 4/30/2010	
Active Datum: RKB @4,848.00ft (a	bove Mean Sea Leve UWI: NW/NW/0/9/S/20/E/2	3/0/0/6/PM/N/429.00/W/0/967.00/0/0	

Active Datum: RKB @4,040.0011 (above weat) Sea Leve					OVI. 144/144//0/05/05/05/05/05/05/05/05/05/05/05/05/						
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation			
4/28/2010	7:00 - 20:30	13.50	COMP	36	E	Р		JSA FRAC TECH & CASED HOLE ALL CREWS ON LOCATION.			

PRIOR TO FRACING, TANKS WERE ROLLED AND CHECKED FOR H2S. NONE FOUND.

MIRU FRAC TECH & CASEDHOLE SOLUTIONS.

[STG#1] RIH W/ PERF GUNS & PERF THE M.V. @ 10.428-10.432 & 10.488-10.494, 4 SPF, USING 3-3/8 EXP GUNS, 23 GM, 0.36, [40 HOLES] WHP=165#. P.T. SURFACE LINES TO 8000#. BRK DN PERFS @ 3687 @ 6 BPM. ISIP=3133, FG=.73. BULLHEAD 3 BBLS 15% HCL. CALCULATE 100% PERFS OPEN. PMP'D 948 BBLS SLK WTR & 26,749# 30/50 TEXAS GOLD SAND W/ 5000# 20/40 SLC SAND @ TAIL. ISIP=3363, FG=.75, NPI=230, MP=6484, MR=52, AP=5530, AR=48 BPM.

[STG#2] RIH W/ HLBRTN 8K CBP & PERF GUNS. SET CBP @ 10,206. PERF THE M.V. @ 9942-9944, 9994-9996, & 10,170-10,176, 4 SPF, USING 3-3/8" EXP GUNS, 23 GM, 0.36, [40 HOLES]. WHP=1400. BRK DN PERFS @ 3952 @ 6 BPM. ISIP=3351, FG=.77,

CALCULATE 31/40 78% PERFS OPEN. PMP'D 820 BBLS SLK WTR & 28,149# 30/50 TEXAS GOLD SAND W/ 5000# SLC 20/40 SAND @ TAIL ISIP=3616, FG=.79, NPI=265, MP=6630, MR=53, AP=6150, AR=48 BPM.

[STG#3] RIH W/ HLBRTN 8K CBP & PERF GUNS. SET CBP @ 9918. PERF THE M.V. @ 9846-9850, 4 SPF, 9866-9872, 3 SPF, & 9886-9888, 4 SPF USING 3-3/8" EXP GUNS, 23 GM, 0.36, [42 HOLES] WHP= 1337. BRK DN PERFS @ 5848 @ 6 BPM. ISIP=3316, FG=.77, CALCULATE 100% PERFS OPEN. PMP'D 1042 BBLS SLK WTR, 38,747# 30/50 TEXAS GOLD W/ 5000# SLC 20/40 SAND.ISIP=3369, FG=.77, NPI=53, MP=6508, MR=53, AP=5400, AR=52 BPM.

[STG#4] RIH W/ HLBRTN 8K CBP & PERF GUNS. SET CBP @ 9704'. PERF THE M.V. @ 9392-9394, 3 SPF, 9472-9476, 2 SPF, & 9668-9674, 4 SPF, USING 3-3/8" EXP GUNS, 23 GM, 0.36, [38 HOLES] WHP= 1540. BRK DN PERFS @ 4111 @ 6 BPM. ISIP=2762, FG=.72, CALCULATE 100% PERFS OPEN. PMP'D 1357 BBLS SLK WTR, 53,789# 30/50 TEXAS GOLD SAND W/ 5000# SLC 20/40 SAND @ TAIL ISIP=3145, FG=.76, NPI=383, MP=6148, MR=52, AP=4910, AR=51 BPM.

[STG#5] RIH W/ HLBRTN 8K CBP & PERF GUNS. SET CBP @ 9016. PERF THE M.V. @ 8964-8968 & 8980-8986, 4 SPF, USING 3-3/8" EXP GUNS, 23 GM, 0.36, [40 HOLES] WHP=1425. BRK DN PERFS @ 4859 @ 6 BPM. ISIP=2797, FG=.74. CALCULATE 100% PERFS OPEN. PMP'D 1323 BBLS SLK WTR, 52,415# 30/50 TEXAS GOLD SAND W/ 5000# SLC 20/40 SAND @ TAIL. ISIP=3098, FG=.78, NPI=301, MP=5990, MR=52, AP=4805, AR=51 BPM.

2

11:58:01AM 5/28/2010

#### **US ROCKIES REGION Operation Summary Report** Spud Date: 2/24/2010 Spud Conductor: 2/9/2010 Well: NBU 920-23D Rig Name No: GWS 1/1 Site: NBU 920-23D Project: UTAH-UINTAH End Date: 4/30/2010 Start Date: 4/28/2010 Event: COMPLETION Active Datum: RKB @4,848.00ft (above Mean Sea Leve UWI: NW/NW/0/9/S/20/E/23/0/0/6/PM/N/429.00/W/0/967.00/0/0 Operation MD From Code Phase Sub Time Duration Date Start-End Code (ft) (hr) [STG#6] RIH W/ HLBRTN 8K CBP & PERF GUNS. SET CBP @ 8150. PERF THE WASATCH @ 7972-7974, 8024-8026, 8046-8048, 3 SPF, 8102-8104 4 SPF, & 8124-8128, 3 SPF, USING 3-3/8" EXP GUNS, 23 GM, 0.36, [38 HOLES] WHP= 763. BRK DN PERFS @ 2485 @ 4 BPM. ISIP=2126, FG=.70. CALCULATE 82%, 31/38 PERFS OPEN. PMP'D 1354 BBLS SLK WTR, 61,358# 30/50 TEXAS GOLD SAND W/ 5000# SLC 20/40 SAND W/ 5 GAL RESIN ACTIVATOR MIXED IN @ TAIL. RAMP TO 3# SAND. ISIP=3110, FG=.82, NPI=984, MP=6437, MR=52, AP=4788, AR=51 BPM. [STG#7] RIH W/ HLBRTN 8K CBP & PERF GUNS. SET CBP @ 7670'. PERF THE M.V. @ 7624-7634, 4 SPF. USING 3-3/8" EXP GUNS, 23 GM, 0.36, [40 HLS] WHP= 1078#. BRK DN PERFS @ 3492# @ 5 BPM. ISIP=2485, FG=.76. CALCULATE 34/40, 85% PERFS OPEN. PMP'D 760 BBLS SLK WTR, 35,136# 30/50 TEXAS GOLD SAND W/ 5000# 20/40 SLC SAND W/ 5 GAL RESIN ACTIVATOR MIXED IN @ TAIL. RAMP TO 3# SAND. ISIP=2845, FG=.80, NPI=360, MP=6572, MR=52, AP=4440, AR=51 BPM. [KILL PLUG] RIH W/ HLBRTN 8K CBP & SET @ 7574' COULD NOT GET OFF PLUG PULL OUT OF ROPE SOCKET. POOH W/ WIRE LINE. RDMO CASEDHOLE SOLUTIONS & FRAC TECH. GRAND TOTAL 30/50 & SLC SAND=296,343# & TOTAL FI UID=7604 BBLS, CALL FOR FISHING HAND TO FISH WEIGHT BARS, CCL & SETTING TOOL IN AM. FISH TOP @ 7150' SWI-SDFN. JSA--- FISHING TOOLS. MONUMENT MNTHLY 30 8:00 - 17:00 9.00 COMP 4/29/2010 SFTY MTG. [DAY 4] SICP=0#. ND FRAV VALVES, NUBOP. R/U FLOOR & TBG EQUIPMENT. P/U 3-1/8" 0.S., EXT, B.S. & JARS & RIH ON 2-3/8" TBG. TAG SAND @ 7539'. WASH OVER & C/O TO TOP OF FISH @ 7550. LATCH ON FISH. JAR LOOSE IN 7 TRIES. POOH STDG BACK TBG. L/D FISHING TOOLS & WIRELINE TOOLS. P/U 3-7/8" SEALED BIT, POBS W/ XN & RIH OUT OF DERRICK ON 2-3/8" L-80 TBG. TAG CBP# 1 @ 7574'. SW-SDFN

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#### **US ROCKIES REGION Operation Summary Report** Spud Date: 2/24/2010 Spud Conductor: 2/9/2010 Well: NBU 920-23D Rig Name No: GWS 1/1 Site: NBU 920-23D Project: UTAH-UINTAH End Date: 4/30/2010 Start Date: 4/28/2010 Event: COMPLETION Active Datum: RKB @4,848.00ft (above Mean Sea Leve | UWI: NW/NW/0/9/S/20/E/23/0/0/6/PM/N/429.00/W/0/967.00/0/0 Operation Code P/U MD From Sub Duration Phase Date Time Code (ft) Start-End (hr) IDAY 51 JSA DRILLING PLUGS. COMP 30 4/30/2010 7:00 EOT @7507'. ESTABLISH CIRCULATION W/ 2% KCL WTR. P.T. BOP TO 2500#. RIH, TAG SAND @ 7517'. C/O 10' SAND TO CBP# @ 7527'. WAS SET @ 7574'. SLID UP HOLE WHEN SET & TRYING TO GET OFF & JAR TOOLS LOOSE. [DRLG CBP#1] @ 7527'. D/O HLBRTN 8K CBP IN 10 MIN. 100# INCREASE. RIH, TAG SAND @ 7630'. C/O 40' SAND.FCP=100# [DRLG CBP#2] @ 7670. D/O HLBRTN 8K CBP IN 10 MIN. 100# INCREASE. RIH, TAG SAND @ 8120'. C/O 30' SAND.FCP=150#. [DRLG CBP#3] @ 8150'. D/O HLBRTN 8K CBP IN 10 MIN. 100# INCREASE. RIH, TAG SAND @ 8991'. C/O 25' SAND.FCP=300# [DRLG CBP#4] @ 9016'. D/O HLBRTN 8K CBP IN 10 MIN. 50# INCREASE. RIH, TAG SAND @ 9679'. C/O 25' SAND. FCP=400#. [DRLG CBP#5] @ 9704'. D/O HLBRTN 8K CBP IN 5 MIN. 50# INCREASE. RIH, TAG SAND @ 9888'. C/O 30' SAND. FCP=400#. [DRLG CBP#6] @ 9918'. D.O HLBRTN 8K CBP IN 6 MIN. 50# INCREASE. RIH, TAG SAND @ 10,196'. C/O 10' SAND.FCP=425#. [DRLG CBP#7] @ 10,206'. D/O HLBRTN 8K CBP IN 7 MIN. 25# INCREASE. RIH, TAG SAND @ 10,515'. C/O 67' SAND TO PBTD @ 10,582'. CIRCULATE WELL CLEAN. R/D SWVL. POOH & L/D 21 JTS ON FLOAT. LAND TBG ON HNGR W/ 314 JTS NEW 2-3/8" L-80 TBG, EOT @ 9914.22' & POBS W/ XN @ 9912.02. AVG 8 MIN PLUG & C/O 237' SAND. R/D FLOOR & TBG EQUIPMENT. NDBOP, NUWH. DROP BALL DOWN TBG & PMP OFF THE BIT @ 2800#. OPEN WELL TO FLOW BACK TANK ON OPEN CHOKE. FTP=100, SICP=2450#. 2 PM TURN WELL OVER TO FBC. LTR @ 2 PM= 5204 BBLS. RACK EQUIPMENT. RIG DOWN RIG. 3 PM SDF-WE NOTE: 349 JTS DELIVERED. 2-3/8" L-80 NEW 314 JTS LANDED. 35 JTS RETURNED. WELL TURNED TO SALES @ 1200 HR ON 5/1/10 -**PROD** 50 12:00 -5/1/2010 1700 MCFD, 1200 BWPD, CP 3000#, FTP 2200#, CK 20/64"

5/28/2010 11:58:01AM

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7:00

7:00 -

5/2/2010

7 AM FLBK REPORT: CP 2750#, TP 2150#, 20/64"

7 AM FLBK REPORT: CP 3000#, TP 2100#, 20/64"

CK, 55 BWPH, MED SAND, - GAS TTL BBLS RECOVERED: 3513 BBLS LEFT TO RECOVER: 4091

CK, 43 BWPH, MED SAND, - GAS TTL BBLS RECOVERED: 4640 BBLS LEFT TO RECOVER: 2964

US ROCKIES REGION										
Operation Summary Report										
Well: NBU 920-	Spud Co	nductor	2/9/201	10	Spud Date: 2/2	4/2010				
Project: UTAH-	UINTAH		Site: NBI	J 920-2	3D			Rig Name No: GWS 1/1		
Event: COMPL			Start Dat	e: 4/28/	2010			End Date: 4/30/2010		
Active Datum: RKB @4,848.00ft (above Mean Sea Lev					eve UWI: NW/NW/0/9/S/20/E/23/0/0/6/PM/N/429.00/W/0/967.00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code		P/U	MD From (ft)	Operation		
5/3/2010	7:00 -	<u> </u>		33	Α			7 AM FLBK REPORT: CP 2650#, TP 1800#, 20/64" CK, 31 BWPH, MED SAND, - GAS TTL BBLS RECOVERED: 5446 BBLS LEFT TO RECOVER: 2158		
5/4/2010	7:00 -			33	Α			7 AM FLBK REPORT: CP 2500#, TP 1625#, 20/64" CK, 23 BWPH, MED SAND, - GAS TTL BBLS RECOVERED: 6046 BBLS LEFT TO RECOVER: 1558		
5/5/2010	7:00 -			33	Α			7 AM FLBK REPORT: CP 2200#, TP 1500#, 20/64" CK, 8 BWPH, LIGHT SAND, - GAS TTL BBLS RECOVERED: 6258 BBLS LEFT TO RECOVER: 1346		

5 11:58:01AM 5/28/2010

	FORM 9				
	DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0577A		
	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr			
	sals to drill new wells, significantly deepen or gged wells, or to drill horizontal laterals. Us		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 920-23D		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		9. API NUMBER: 43047505740000		
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	PHON treet, Suite 600, Denver, CO, 80217 3779	<b>IE NUMBER:</b> 720 929-6007 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0429 FNL 0967 FWL QTR/QTR, SECTION, TOWNSHI Otr/Otr: NWNW Section: 23	P, RANGE, MERIDIAN: 3 Township: 09.0S Range: 20.0E Meridian:	S	COUNTY: UINTAH  STATE: UTAH		
11.	E NATURE OF NOTICE, REPORT,				
	CK APPROPRIATE BOXES TO INDICAT	<u> </u>	OR OTHER DATA		
TYPE OF SUBMISSION	Π	TYPE OF ACTION			
NOTICE OF INTENT	☐ ACIDIZE ☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CASING REPAIR ☐ CHANGE WELL NAME		
Approximate date work will start: 8/12/2010	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION		
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK		
	☐ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION		
SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON		
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL		
DRILLING REPORT Report Date:	☐ WATER SHUTOFF	SI TA STATUS EXTENSION	✓ APD EXTENSION		
·	☐ WILDCAT WELL DETERMINATION	OTHER	OTHER:		
Kerr-McGee Oil & G extension to this A	MPLETED OPERATIONS. Clearly show all pert as Onshore, L.P. (Kerr-McGee) APD for the maximum time allo with any questions and/or com	respectfully requests an wed. Please contact the	REQUEST DENIED Utah Division of Oil, Gas and Mining		
		Da	ate: August 23, 2010		
		В	y:		
NAME (PLEASE PRINT) Danielle Piernot	<b>PHONE NUMBER</b> 720 929-6156	TITLE Regulatory Analyst			
SIGNATURE N/A		<b>DATE</b> 8/12/2010			



# The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices** 

# Request for Permit Extension Validation Well Number 43047505740000

**API:** 43047505740000 Well Name: NBU 920-23D

Location: 0429 FNL 0967 FWL QTR NWNW SEC 23 TWNP 090S RNG 200E MER S

Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.

**Date Original Permit Issued:** 8/11/2009

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that req

uire revision. Following is a checklist of some items related to the application, which should be verified.
<ul> <li>If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes No</li> </ul>
<ul> <li>Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?</li> <li>Yes</li> <li>No</li> </ul>
<ul> <li>Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?</li> <li>Yes</li> <li>No</li> </ul>
<ul> <li>Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?</li> <li>Yes</li> <li>No</li> </ul>
• Has the approved source of water for drilling changed?   Yes   No
<ul> <li>Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?</li> <li>Yes</li> <li>No</li> </ul>
• Is bonding still in place, which covers this proposed well?   Yes  Oil, Gas and Mining
nature: Danielle Piernot Date: 8/12/2010
Title: Regulatory Analyst Representing: KERR-MCGEE OIL & GAS ONSHORP August 23, 2010

Sig

By:\_

Sundry Number: 1-6614 Approval of this: 43047505740000

Action is Necessary

	STATE OF UTAH		FORM 9		
	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	G	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0577A		
SUNDF	RY NOTICES AND REPORTS ON	N WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Ute Tr		
	sals to drill new wells, significantly deepen exis ugged wells, or to drill horizontal laterals. Use A		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 920-23D		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONS	HORE, L.P.		<b>9. API NUMBER:</b> 43047505740000		
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th S	<b>PHONE N</b> Street, Suite 600, Denver, CO, 80217 3779	UMBER: 720 929-6515 Ext	9. FIELD and POOL or WILDCAT: NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0429 FNL 0967 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NWNW Section: 23		STATE: UTAH			
11. CHE	CK APPROPRIATE BOXES TO INDICATE N	ATURE OF NOTICE, REPORT,	OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	ACIDIZE	ALTER CASING	✓ CASING REPAIR		
NOTICE OF INTENT Approximate date work will start: 7/12/2011	☐ CHANGE TO PREVIOUS PLANS	CHANGE TUBING	☐ CHANGE WELL NAME		
	☐ CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE		
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION		
Date of Work Completion:	☐ OPERATOR CHANGE	PLUG AND ABANDON	☐ PLUG BACK		
	☐ PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION		
SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION ☐	SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON		
	☐ TUBING REPAIR ☐	VENT OR FLARE	☐ WATER DISPOSAL		
DRILLING REPORT	□ WATER SHUTOFF □	SI TA STATUS EXTENSION	APD EXTENSION		
Report Date:	☐ WILDCAT WELL DETERMINATION ✓	OTHER	OTHER: Wellhead Repair		
12 DESCRIBE BRODOSED OR CO	DMPLETED OPERATIONS. Clearly show all pertiner		, <del></del>		
l .	ts approval to conduct wellhead/				
on the subject we	ell location. Please find the attach	ed procedure for the			
propos	sed repair work on the subject we	ell location.	Accepted by the Utah Division of		
			Oil, Gas and Mining		
			07/20/2011		
		Da	ate: 07/20/2011		
		В	Lork Lunt		
		<b>D</b> ;	y		
NAME (PLEASE PRINT) Gina Becker	<b>PHONE NUMBER</b> 720 929-6086	TITLE Regulatory Analyst II			
SIGNATURE N/A		<b>DATE</b> 7/12/2011			

# WORKORDER #: 88119340

Name: <u>NBU 920-23D</u> 7/11/2011

Surface Location: NWNW Sec. 23, T9S, R20E

Uintah County, UT

**API:** 4304750574 **LEASE#:** UTU-0577A

**ELEVATIONS:** 4835' GL 4848' KB

**TOTAL DEPTH:** 10,641' **PBTD:** 10,538'

**SURFACE CASING:** 8 5/8", 28# J-55 @ 2746'

**PRODUCTION CASING:** 4 1/2", 11.6#, I-80 @ 10,626'

TOC @ 754' per CBL (with min 50' isolation)

**PERFORATIONS:** Wasatch 7624' – 8128'

Mesaverde 8964' – 10,494'

Tubular/Borehole	Drift	Collapse psi	Burst psi	Capacities			
	inches			Gal./ft.	Cuft/ft.		Bbl./ft.
2.375" 4.7# J-55 tbg.	1.901	8100	7700	0.1624		0.02171	0.00387
4.5" 11.6# I-80	3.875	6350	7780	0.6528		0.0872	0.0155
8.625" 28# J-55	8.097	1370	2950	2.6223		0.3505	0.0624
Annular Capacities							
2.375" tbg. X 4 1/2" 11.6# csg				0.4227	0.0565		0.01

### **GEOLOGICAL TOPS:**

1749' Green River

2489' Mahogany

5143' Wasatch

8386' Mesaverde

#### NBU 920-23D- WELLHEAD REPAIR PROCEDURE

#### PREP-WORK PRIOR TO MIRU:

- 1. Dig out down to the 2" surface casing valve or to the valve on the riser off the surface casing.
- 2. Install a tee with 2 valves, with a pressure gauge and sensor on one valve.
- 3. Open casing valve and record pressures.
- 4. Install nipple and steel hose on the other valve, the relief valve,. Do not use hammer unions. No impact equipment or tools to be used for any of this installation. Extend hose and hard piping to a downwind location at least 100' from the wellhead. Consider installing a manifold so that vent area could be in two locations approx. 90 degrees apart from the wellhead.
- 5. Open the relief valve and blow well down to the atmosphere.
- 6. Make a determination of amount of gas flow, either by installation of a choke nipple, bucket test or other.
- 7. Shut well in. Observe for rate of build-up by utilizing sensor data. Do not build-up for more than 24 hours. Vent gas through the vent line and leave open to the atmosphere.

#### **WORKOVER PROCEDURE:**

- 1. MIRU workover rig.
- 2. Kill well with 10# brine / KCL (dictated by well pressure ).
- 3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.
- 4. POOH w/ tubing laying down extra tubing.
- 5. Rig up wireline service. RIH and set CBP @ ~7574'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service. TIH w/ tubing and seating nipple. Land tubing ±60' above cement. RDMO.
- 6. Monitor well pressures. If surface casing is dead. MIRU. ND WH and NU BOP. POOH w/ tubing.
- 7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.

#### **CUT/PATCH PROCEDURE:**

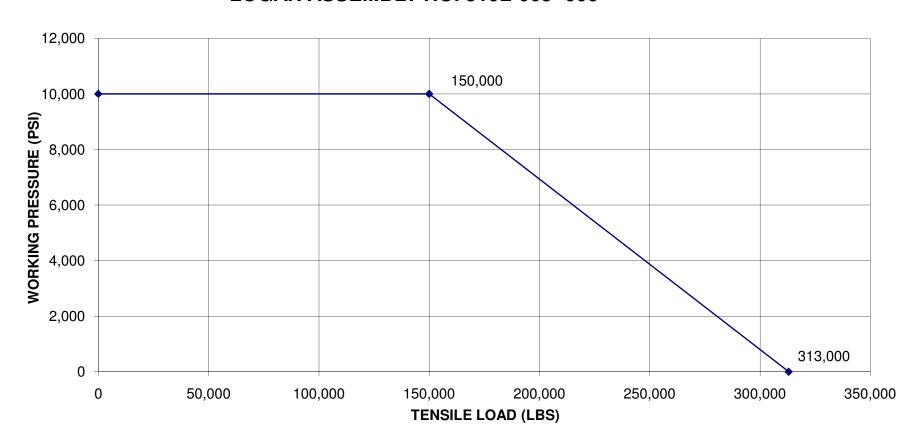
- 1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.
- 2. POOH, LD cutters and casing.
- 3. PU 7 3/8" overshot with 4 ½" right hand standard wicker grapple, 1 4 ¾" drill collar with 3 ½" IF threads, pup joint, manual bumper sub, and crossovers. If casing cut is deeper than ±30' utilize >7000 ft-lb torque pipe as needed. Pull a minimum of 10,000# to keep grapple engaged if cement top is high (<~900'). If cement top is low (>~900'), more weight will be required to put casing in neutral. Torque casing string to ±7000 ft-lbs, count number of turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out, release overshot, POOH, and lay down.
- 4. TIH w/ skirted mill and dress off the fish top for approximately ½ hour. TOOH.
- 5. PU & RIH w/  $4\frac{1}{2}$ " 10k external casing patch on  $4\frac{1}{2}$ " P-110 casing. Ensure that sliding sleeve assembly shifts ±3' and casing tags no-go portion of patch. NOTE: Shear pins will shear at 3500 to 4500 lbs.
- 6. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 3500 psi.
- 7. Install slips. Land casing w/ 80,000# tension.
- 8. Cut-off and dress 4 ½" casing stub.
- 9. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~7524'. Clean out to PBTD (10,538').
- 10. POOH, land tbg and pump off POBS.
- 11. NUWH, RDMO. Turn well over to production ops.

#### **BACK-OFF PROCEDURE:**

- 1. PU internal casing cutters and RIH. Cut casing at +/- 6' from surface.
- 2. POOH, LD cutters and casing.
- 3. PU 4 ½" overshot. RIH, latch fish. Pick string weight to neutral.
- 4. MIRU casing crew and wireline services. RIH and shoot string shot at casing collar @ ± 46'.
- 5. Back-off casing, POOH.

- 6. PU new casing joint with buttress threads and entry guide and RIH. Tag casing top. Thread into casing and torque up to ±7000 ft-lbs, count number of additional turns to make-up, and document in the daily report. Ensure that tongs are safely anchored to rig and that all personnel are at a safe working distance from the tongs during torque-up and torque release. After initial make-up, place pipe torque to neutral and mark pipe. Place ±7000 ft-lbs on casing a second time, count turns, then return pipe torque to neutral and count turns. Repeat if torque-up turns do not equal torque release turns. Once torque-in equals torque-out go to step 7.
- 7. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 3500 psi.
- 8. Install slips. Land casing w/ 80,000# tension.
- 9. Cut-off and dress 4 ½" casing stub.
- 10. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~7524'. Clean out to PBTD (10,538').
- 11. POOH, land tbg and pump off POBS.
- 12. NUWH, RDMO. Turn well over to production ops.

# STRENGTH DATA FOR LOGAN 5.88" OD "L" TYPE CSG PATCH 4-1/2 CASING, 10K PSI MAX WP 125K YIELD MAT'L LOGAN ASSEMBLY NO. 510L-005 -000



COLLAPSE PRESSURE: 11,222 PSI @ 0 TENSILE 8,634 PSI @ 220K TENSILE

Tensile Strength @ Yield: Tensile Strength w/ 0 Int. Press.= 472,791lbs. Tensile Strength w/ 10K Int. Press.= 313,748lbs.

DATA BY SLS 11/16/2009

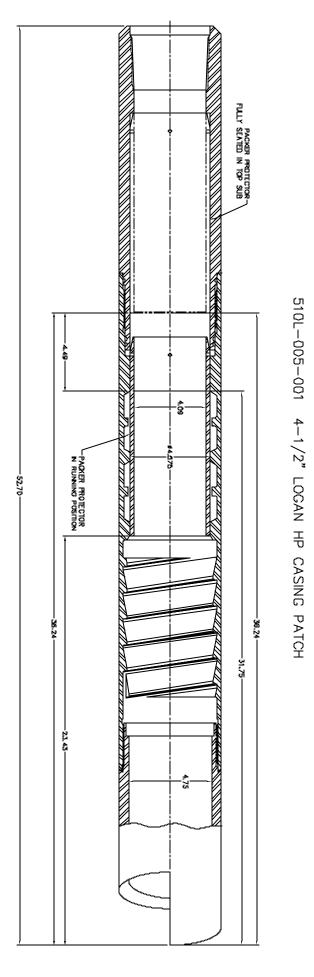


# **Logan High Pressure Casing Patches Assembly Procedure**

All parts should be thoroughly greased before being assembled.

- 1. Install all four Logan Type "L" Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.
- 2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector through the four Type "L" Packers.
- 3. Align Shear Pin Holes in Packer Protector so that the holes have just passed into the counter bore at the Top Sub end, refer to diagram. The Packer Protector is provided with four Shear Pin Holes. Use only two holes, 180 degrees apart and install the pins.
- 4. Screw the Basket Grapple in from the lower end of the Bowl, using left-hand rotation. The Tang Slot in the Basket Grapple must land in line with the slot in the Bowl.
- 5. Insert the Basket Grapple Control into the end of the Bowl. Align Tang on the Basket Grapple Control with the Tang Slot of the Bowl and Basket Grapple. This secures the Bowl and the Basket Grapple together.
- 6. Install the Cutlipped Guide into the lower end of the Bowl.
- 7. Install O-Rings on the two five-foot long Extensions. Screw the first Extension into the top end of the Bowl. Screw the second Extension into the top end of the first Extension.
- 8. Install O-Ring on Top Sub. Screw Top Sub into top end of second Extension.

Follow recommended Make-Up Torque as provided in chart.



RECEIVED Jul. 12, 2011

Sundry Number: 27822 API Well Number: 43047505740000

	STATE OF UTAH			FORM 9				
[	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND M		i	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU 0577A				
SUNDR	RY NOTICES AND REPORTS	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: UTE					
	posals to drill new wells, significant reenter plugged wells, or to drill hori: n for such proposals.		7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES					
1. TYPE OF WELL Gas Well		8. WELL NAME and NUMBER: NBU 920-23D						
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	9. API NUMBER: 43047505740000							
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	<b>NE NUMBER:</b> 9 720 929-6	9. FIELD and POOL or WILDCAT: 5NATERAL BUTTES						
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0429 FNL 0967 FWL		COUNTY: UINTAH						
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NWNW Section:	STATE: UTAH							
11. CHECI	K APPROPRIATE BOXES TO INDIC	ATE N	ATURE OF NOTICE, REPOR	T, OR OTHER DATA				
TYPE OF SUBMISSION			TYPE OF ACTION					
	ACIDIZE		ALTER CASING	✓ CASING REPAIR				
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE WELL NAME				
	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE				
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	□ F	RACTURE TREAT	NEW CONSTRUCTION				
10/24/2011	OPERATOR CHANGE	F	PLUG AND ABANDON	PLUG BACK				
SPUD REPORT	PRODUCTION START OR RESUME	□ F	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION				
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON				
	TUBING REPAIR		ENT OR FLARE	WATER DISPOSAL				
DRILLING REPORT Report Date:	WATER SHUTOFF	□ s	SI TA STATUS EXTENSION	APD EXTENSION				
	WILDCAT WELL DETERMINATION		THER	OTHER:				
40 DECODINE PROPOSED OR	COMPLETED OPERATIONS. Clearly sho	!!						
The operator has co	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY July 18, 2012							
NAME (PLEASE PRINT) Jaime Scharnowske	<b>PHONE NUM</b> 720 929-6304	MBER	TITLE Regulartory Analyst					
SIGNATURE N/A			<b>DATE</b> 7/17/2012					

RECEIVED: Jul. 17, 2012

Sundry Number: 27822 API Well Number: 43047505740000

					U	S ROC	KIES R	EGION	
Operation Summary Report									
Well: NBU 920-2			Spud Co	onductor: 2/9/2010 Spud Date: 2/24/			Spud Date: 2/24	1/2010	
Project: UTAH-U	INTAH			Site: NBL	J 920-23E	)			Rig Name No: MONUMENT/698
Event: WELL WO	ORK EXF	PENSE		Start Dat	e: 10/12/2	2011			End Date: 10/17/2011
Active Datum: RI	KB @4,8	48.00usft (a	bove Mean Se	a	UWI: N\	W/NW/0/9	9/S/20/E/2	23/0/0/6/PM/N/429	.00/W/0/967.00/0/0
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
10/12/2011	12:00	- 13:00	1.00	ALL	30	G	Р	,	ROAD RIG F/ NBU 920-23M TO NBU 920-23D.
		- 13:30	0.50	ALL	48		Р		HSM, REVIEW RU & RD
		- 15:00	1.50	ALL	30	Α	Р		MIRU
	15:00	- 17:00	2.00	ALL	47	Α	Р		BLEW TBG DWN, CONTROL TBG W/ 10 BBLS, ND WH, NU BOP'S, RU FLOOR & TBG EQUIPMENT, UNABLE TO UNLAND TBG HANGER DUE TO PIPE RAMS LEAKING WILL REPLACE AM. SWI, SDFN.
	7:00	- 9:00	2.00	PROD	35				Tb 128 Cs 582 FL 8450 Ran w/Up Shear Fish Tool to SN at 9960, latched, pulled Shear Master Floating Spring, pulled out. Returned well to production. Rigged down. For Rig Job.
10/13/2011	7:00	- 7:30	0.50	ALL	48		Р		HSM, REVIEW SETTING CIBP.
	7:30	- 11:00	3.50	ALL	31	I	Р		FCP. 130 PSI. SITP. 550 PSI. REPLACE PIPE RAM ON BOP'S, UNLAND TBG HANGER, POOH 314 JTS. 2-3/8 L-80 TBG, LD POBS.
	11:00	- 12:30	1.50	ALL	34	1	Р		RU J-W WIRELINE COMPANY, RIH & SET 4-1/2 BAKER 10K CIBP @ 7560', POOH TOOLS, RD J-W WIRELINE COMPANY.
	12:30	- 15:00	2.50	ALL	33	D	Р		FILL CSG W/ T-MAC, PRESSURE TEST CIBP TO 3000 PSI. SWI, SDFN.
10/14/2011	7:00	- 7:30	0.50	ALL	48		Р		HSM, REVIEW BACK-OFF PROCEDURE
		- 9:00	1.50	ALL	47	A	P		RD FLOOR & TBG EQUIPMENT, ND BOP'S, NU CSG BOWL, RU PWR SWVL, PU INTERNAL CSG CUTTER & RIH, CUT CSG 3' F/ SURFACE, POOH, LD CUTTER & CSG W/ MANDRAL, RD PWR SWVL, PU 4-1/2 OVERSHOT, RIH, LATCH FISH, MIRU CSG CREW & WIRELINE SERVICES, RIH & SHOT STRING COLLAR, BACK-OFF CSG PUP JNT, POOH, PU NEW 15' CSG PUP, TAG CSG TOP, THREAD INTO CSG, TORQUE CSG TO 7000# W/ 22 ROTATIONS ON CSG, PU 4-1/2 CSG TO 100,000# TENSION, RD CSG CREW & WIRELINE SERVICES.
	9:00	- 10:15	1.25	ALL	33	С	Р		RU B&C QUICK TEST, P.T. 4-1/2 CSG TO 1000 PSI. FOR 15 MINS, LOST 31 PSI. IN 15 MINS, P.T. 4-1/2 CSG TO 3500 PSI. FOR 30 MINS, LOST 37 PSI. IN 30 MINS, NO COMMUNICATION BETWEEN 4-1/2 & SURFACE CSG, RD B&C QUICK TEST.
	10:15	- 15:00	4.75	ALL	31	I	Р		SET C-21 SLIPS, LAND 4-1/2 CSG W/ 80,000# TENSION, CUT-OFF & DRESS 4-1/2 CSG STUB, INSTALL FLANGE W/ CROSSOVER SPOOL, TORQUE ALL 1-7/8 BOLTS, NU CSG BOWL, NU BOP'S, RU FLOOR & TBG EQUIPMENT, PU 3-7/8 W/ 1.875 XN POBS & RIH 240 JTS. 2-3/8 L-80 TBG, TAG CIBP @ 7560', RU PWR SWVL, SWI, SDFWE.
10/17/2011	7:00	- 7:30	0.50	ALL	48		Р		HSM, REVIEW RU PWR SWVL, FOAM UNIT
	7:30	- 9:30	2.00	ALL	44	С	Р		RU TECH FOAM, EST CIRC IN 30 MINS, D/O CIBP @ 7560' IN 1HR. 33 MINS, HAD 50 PSI. INCREASE, KILL TBG, LD PWR SWVL.

1/24/2012 12:35:59PM 1

Sundry	Number: 2	27822 7	APT We	11 N	<u>Iumbe</u>	r: 4	30475057	740000		
				U	S ROC	KIES RI	EGION			
Operation Summary Report										
	• •									
Well: NBU 920-2			<del></del>	nductor: 2			Spud Date: 2/24			
Project: UTAH-U	INTAH		Site: NBL	J 920-23D	)			Rig Name No: MONUMENT/698		
Event: WELL WO	ORK EXPENSE		Start Date	e: 10/12/2	011			End Date: 10/17/2011		
Active Datum: Rl Level)	KB @4,848.00usft (ab	oove Mean Se	ea	UWI: NV	V/NW/0/9	9/S/20/E/2	3/0/0/6/PM/N/429	0.00/W/0/967.00/0/0		
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation		
	9:30 - 15:30	6.00	ALL	31	I			RIH TBG F/ DERRICK, PU 21 JTS. F/ TRAILER, TAG PBTD @ 10,538' CIRC WELL CLEAN, KILL TBG, RD PWR SWVL, DROP BALL, PUMP BIT OFF, W/ 1900 PSI, POOH LD 21 JTS. ON TRAILER, LAND TBG HANGER, RU SWAB EQUIPMENT, RIH W/ 1.9 & BROACH TO 9914', POOH, RD SWAB EQUIPMENT, RD FLOOR & TBG, ND BOP'S, NU WH, RDMO, MOVE TO NBU 920-23F.  TBG DETAIL  KB		
10/24/2011	7:00 - 11:00	4.00	PROD	35				Tb 189 Cs 668 FL GC Ran Spear to TD at 10627, pulled out. Ran w/1.910 Broach to SN at 9960, pulled out. Dropped New Titanium Spring w/single X-cups and roll pin, chased w/1.910 to SN, set Spring, pulled out. Returned Well to Production. Rigged Down		

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